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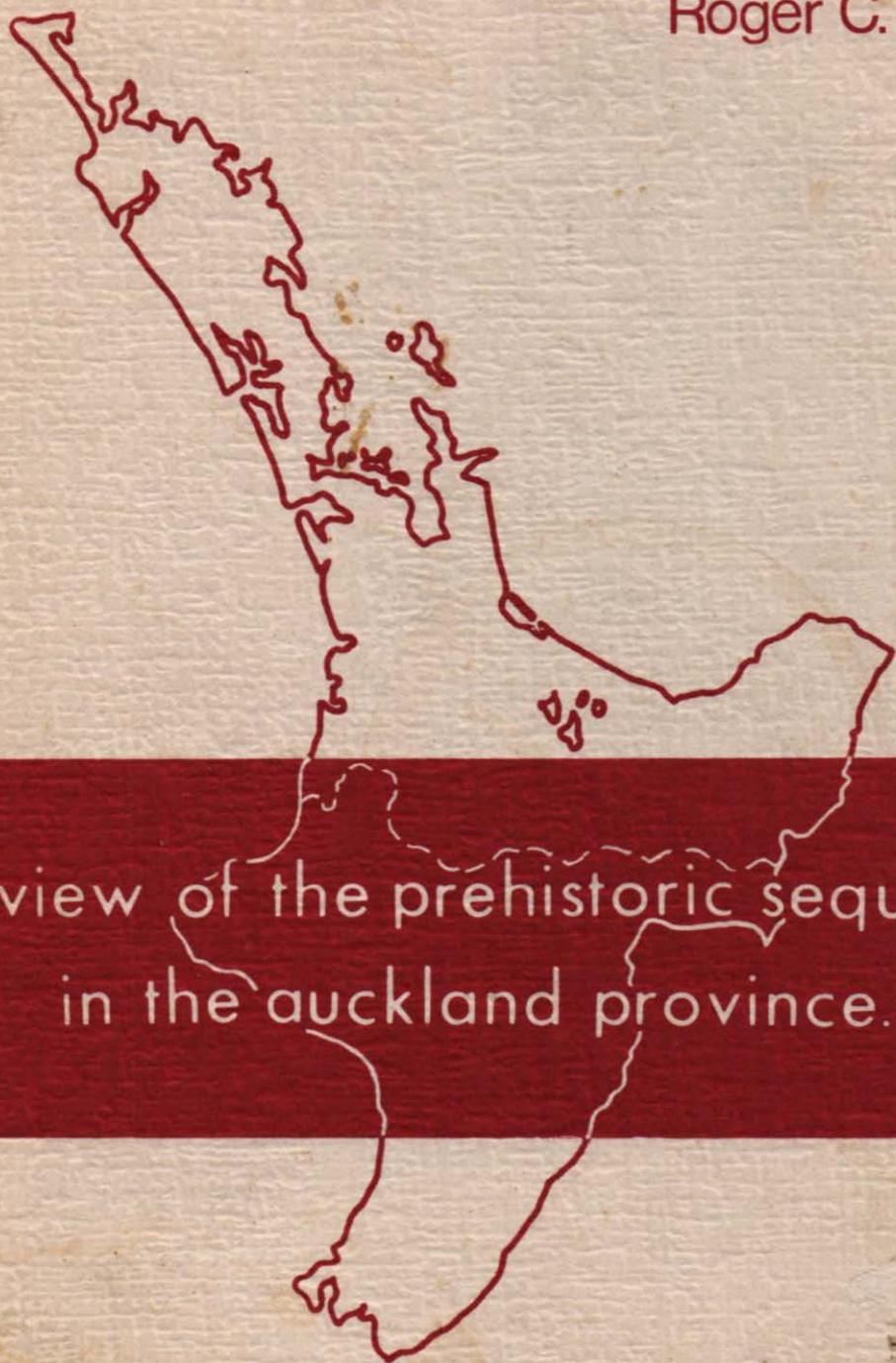
**NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION MONOGRAPH 2:
Roger C. Green, *A Review of the Prehistoric Sequence in the Auckland
Province, 2nd edition***



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Roger C. Green .



a review of the prehistoric sequence
in the auckland province.

Publication of the

Auckland Archaeological Society No.1

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A REVIEW
OF THE PREHISTORIC SEQUENCE
OF THE AUCKLAND PROVINCE

by

ROGER C. GREEN

Second Edition
Edited by B. F. Leach
Dunedin, 1970

A REVIEW
OF THE PREHISTORIC PROBLEMS
OF THE AUSTRALIAN CONTINENT

BY
J. H. COOPER

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FOREWORD TO SECOND EDITION

It is now eight years since this important work by Roger Green was first published. During the interval his *Review* has played more than a minor role in influencing the direction of subsequent archaeological research in New Zealand. This work appeared at a time when the problem of relating excavated horizons, both culturally and chronologically, was particularly acute. For the most part this was attempted, with ambiguous and unsatisfactory results, on the basis of similarities in the artefacts recovered—especially stone adzes. In 1963 this monograph descended on the New Zealand scene like a bombshell, and contributed towards the demise of this long outmoded form of archaeological reconstruction. For the first time a serious attempt was made to circumvent the impasse that had developed with the use of these older methods of site conjunction.

Roger Green, in attempting to take into account prehistoric subsistence economics and settlement type in his review foreshadowed similar efforts and emphasis which has characterised a good deal of New Zealand archaeology since. This work argued that the trends which these features underwent over time were a response to the more subtle results of human settlement in a virgin landmass. In seeking an understanding of the events which followed this first landfall, Green used two main explanatory devices. One was based on the effects of possible changes in climate in New Zealand through the course of its prehistoric period, and the other on the established facts of moa depletion considered alongside theoretical aspects of population expansion and exploration of the new environment. A further feature of the review is the undertone of socio-cultural development over the period of time involved.

With such a novel approach to New Zealand prehistory it was both desirable and inevitable that it should provoke criticism. The vigorous reaction which followed the publication reflects in part a general and innate opposition to change in established and entrenched beliefs. But one of the major contributions which this

work made was precisely that it sought to break through traditional barriers. In doing so it suggested many new avenues where meaningful research might yield a more enlightened prehistory of the kind which Green himself proposed. Just prior to this work, Shawcross characterised older methods of site conjunction as a 'tyranny of the many by the few'; Green's monograph overthrew this tyranny and established a more flexible regime which remains to the present day.

Subsequent archaeology has been far less concerned with subjective and restricted forms of artifact typology than with investigating and relating a host of other details of prehistoric settlement. The mere fact that Green sought to characterise settlement pattern in terms such as 'permanent', 'centrally based', and so on, brings into the sharpest focus the need for rigorous analytical methods by which such information may be reliably extracted from the soil. If anything this heightens, rather than diminishes, the problems of site conjunction at all phases of New Zealand prehistory. Needless to say this problem will always be with us to some extent, nevertheless, adze morphology proved itself to be an insensitive indicator of the kinds of relationships which must be explored in New Zealand. Green's review paved the way to those aspects of prehistoric life which may hold the information required.

There will always be those who maintain that the prehistory of a continent, an island, or a single valley system cannot be written because there is insufficient evidence. On the contrary, ideas of prehistory are, and probably always will be, undergoing perpetual change. Theoretically speaking, the final version will take as long to relate as the events themselves, as Taylor noted some twenty years ago. Prehistory can always be written as it is known, indeed this effort itself results in a better understanding of the problems which require attention. The size of the credibility gap between the public and the archaeologist in New Zealand is mute evidence that insufficient prehistory is

written in this country. In writing the *Review*, Green swept away the accumulated pseudo-problems and petty dogmas which for so long had hindered the growth of New Zealand's prehistory.

The first edition of this work sold very quickly and since then it has been in continuous demand by the layman, student, and professional archaeologist. This reflects not only the paucity of published accounts and a general enthusiasm for the subject, but also a widespread desire to know what views an eminent figure in Oceanic prehistory holds on the culture history of New Zealand. In republishing the work it is hoped to satisfy this demand.

Dr Green expressed some reticence at allowing the *Review* to be released again, and this is

in keeping with his personal modesty on the value of this work. After some prompting he agreed to the proposal and was kind enough to write a further chapter for the new edition. This contains some retrospective comments on the work, along with a discussion of more recent archaeological research in New Zealand. The preceding chapters stand as originally published with a few corrections to minor textual errors.

Permission to republish the *Review* has been generously given by the Auckland Archaeological Society and the New Zealand Archaeological Association.

B. F. Leach

September 1970

TABLE OF CONTENTS

	Page
Foreword to Second Edition	iii
Table of Contents	v
List of Figures	v
Introduction to First Edition	viii
Preface	xi
I. New Zealand Prehistory and the Auckland Province	
Introduction	3
Organization of the Evidence	4
Theory, Sources, The Conceptual Framework	
II. Phases in 'Iwitini'	
Introduction	10
The Phases	11
Settlement Phase, Developmental Phase, Proto Maori Phase, Classic Maori Phase, Early European Maori Phase, Other Ecological Considerations	
III. New Zealand Eastern Polynesian Culture: the Sequence from the Auckland Province	
Introduction	17
The Sequence from the Auckland Province	17
Settlement Phase, Developmental Phase, Experimental Phase	
IV. Maori Culture: the Sequence from the Auckland Province	
Introduction	27
The Sequence from the Auckland Province by Regions	28
Coromandel Coast-Western Bay of Plenty, Whakatane-Rotorua, East Cape-Gisborne, Taupo, Lower Waikato-Hamilton, Hauraki Plains, Greater Auckland Region	
V. Summary, Discussion and Conclusions	
Summary	41
Theoretical Discussion	41
Conclusion	45
An Outline by Phase of the Cultural Sequence for the Auckland Province	
VI. The Prehistoric Sequence in the Auckland Province in Retrospect	48
Bibliography	55

LIST OF FIGURES

	Page
Fig. 1 The Auckland Province in relation to Geographic Regions of Maori Cultural Development about 1790	2
Fig. 2 Principal Sites and Known Quarry Sources in the Auckland Province with Evidence for New Zealand Eastern Polynesian Culture	18
Fig. 3 Principal Excavated Sites in the Auckland Province with Evidence for Maori Culture	26
Fig. 4 Taniwha Pa: Plan	34
Fig. 5 Mt Roskill: Plans of Pits	38
Table 1—The Cultural Sequence on the Hauraki Plains	37

**A REVIEW
OF THE PREHISTORIC SEQUENCE
OF THE AUCKLAND PROVINCE**

By

ROGER C. GREEN

Edited by:

**Jeanette King and
Wilfred Shawcross**

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INTRODUCTION TO FIRST EDITION

This is the first in a series of archaeological publications which will appear under the sponsorship of the Auckland University Archaeological Society. In addition, the New Zealand Archaeological Association is supporting this volume, which is the second under its name, the first being the mimeographed "Handbook to Field Recording", which appeared in 1958. For the present these two archaeological bodies will continue to support each other in this manner, but the time is foreseen when there may be reasons for independent publications, should it be felt that interests differ.

The aim of these publications is to provide an outlet, which does not exist at present in this country, for the printing of reports on such archaeological research as excavations and of works of synthesis, as is the case of the present volume. The nature of this kind of material makes it too bulky or otherwise inappropriate for the *Journal of the Polynesian Society* or that flourishing quarterly, the "Newsletter" of the New Zealand Archaeological Association. The latter publication, while coping manfully with such a rapidly expanding subject, as is shown by the number of references to it cited in the following pages, is restricted by its size and objective, implied by the name.

Finally, in introducing this series, it is worth sparing a little space to account for the form in which the "Prehistoric Sequence" now appears. The photo offset process of printing has been chosen* on the grounds of its relative cheapness and speed, while the size of page is felt to be appropriate to the reproduction of drawings and plans, which form the important visual evidence employed in archaeology. It had been intended that the typed originals for the text should be prepared upon an electric machine. However, this plan was thwarted, so that finally the typing has had to be done upon

a very venerable machine (archaeologists, however, respect things of great antiquity), borrowed, ironically enough, from the Classics Department.

Turning now to this specific work, New Zealand archaeologists will need no introduction either to the "Prehistoric Sequence of the Auckland Province" or to its author, Roger Green. The original paper, from which this present publication has developed, was read at the 10th New Zealand Science Congress on 14 August 1962. The subsequent steps which have led up to this thesis are described by the author in his preface.

The "Prehistoric Sequence" is a "model", that is to say, a device of the mind consisting of a compact, readily comprehensible account of what is otherwise a vast and apparently disorderly mass of evidence relating to the past. Two important factors, which any archaeological model must include, will be those of change, either as the result of the passage of time, or due to regional variation. Under these circumstances the model will be based upon the definition of a number of points, either along a scale measured in units of time, or upon geographical units such as regions. When the definition of the points on the time scale is derived from stages in the evolutionary change of a culture or of some subsidiary technique or artifact, the term "Stadial Model", recently suggested by L. M. Groube, may be applied.

It is now generally accepted that a considerable amount of change has occurred between the time of the first arrival of people in this country and the time when the population was met with and recorded on Captain Cook's expeditions: the culture at that time being now defined as Classic Maori. There are several explanations for the change; it may be the result of separate cultural intrusions or may be largely the result of processes occurring independently within New Zealand. Whatever the causes, there is the problem of the identification of the steps through which this change passed. Unfortunately, for archaeologists, only

*These comments were relevant to the first edition. The present format and reproduction has been achieved by letterpress (Editor).

a small fraction of the total production of artifacts in the past ever survives for study; furthermore, there are difficulties caused by the usually unknown range of variation of forms exhibited by any batch of a particular artifact. But the major problem is that of finding out the relative ages of artifacts within any supposed sequence. Ultimately these relative ages must be demonstrated by some technique or combination of techniques, such as stratigraphy, series of C14 dates, or correlations with some other phenomenon whose chronology is known.

The Stadial Model devised by Roger Green brings a number of innovations to the interpretation of New Zealand Prehistory. In particular there is the obvious, though never stated,

analogy drawn between the sequence of cultural change here and that found in the Near East, where it is generally considered that the evolution, first of agriculture and subsequently of urban civilisation, took place. The analogy suggests that there is to be found here the evolution from a hunting and gathering culture up to a food producing and virtually urban culture. In other words, the cultural change in New Zealand is evolutionary, as opposed to mere change; evolution being understood to be the creation of a higher order of things out of a lower order, as opposed to mere rearrangement at any level.

Wilfred Shawcross

Auckland 1963

PREFACE

This review of the prehistoric sequence for the Auckland Province is a much revised and expanded version of a long paper originally prepared for the symposium on *The Prehistoric Cultural Succession in New Zealand* as one among four papers on the subject, each dealing with a separate area. At that time it contained two appendices which have since been published. A portion of the entire paper was presented at the Tenth Congress of the Royal Society of New Zealand in Christchurch in August of 1962 in conjunction with the New Zealand Archaeological Association's biennial conference. In the conference issue of the Association's *Newsletter* which followed, a summary was published of that portion of the paper actually presented at the time of the conference.

In the controversial atmosphere of the 1962 conference where the then prevailing interpretations of New Zealand prehistory were in open conflict with some archaeologists backing the proposals of Mr J. Golson for an Archaic Phase and others supporting the validity of a Moa-hunter period as redefined by Dr Roger Duff in his conference paper, my paper and a companion one by my colleague Mr F. W. Shawcross were surprisingly well received. Mr Shawcross argued that the two assemblages used at present as a basis for interpretations of the New Zealand evidence were incapable of explaining the finer details of a thousand years of prehistory. He argued that in fact there had been an "archeological tyranny of the many by the few", so that only a limited number of artifacts or artifact types had ever been used to assess the age of any assemblage and that these had been selected because they were among the few well-made portable artifacts most common in museum and private collections. I attempted to provide the creative side of the discussion by proposing a scheme in which a wide variety of evidence could be handled in a way which both illustrates and conforms with the vast accumulation of what was then a somewhat disorganized body of

evidence obtained through recent excavations over the last eight years within the Auckland Province, much of it only now beginning to appear in print. The impact of our proposals when coupled with an assessment of the architectural sequence from two North Island sites by Mr R. H. Parker and of the nature of Classic Maori settlement patterns by Mr L. M. Groube was thus sufficient to channel some of the discussion toward more productive problems than those involving the adequacy of a term to carry the interpretive load demanded of it.

Although appreciating Mr Gathercole's comment (in an after conference note in the *Newsletter* on future strategy and tactics) that Green's "approach to the question of cultural sequence had rendered most of the previous discussion irrelevant", I am under no illusion that the attempt at a synthesis for the *one area that has been almost totally ignored in previous reconstructions of New Zealand prehistory* will now initiate a new phase in New Zealand archaeology or entirely resolve the present controversy. But I do have some hope that it may stimulate investigation into problems and evidence that has been very largely ignored and force New Zealand archaeologists to expend additional intellectual effort in applying a broader and more refined set of concepts to the analysis of those materials they are now winning from the ground by means of precise and sophisticated techniques of investigation. Their investment in time, labour and money and the quality of their information warrants attention to more than the better finished portable artifacts suitable for museum display and their interpretations more than a simple lumping of all results into either one or the other of two periods, phases or peaks in New Zealand prehistory. Thus it is my hope that the cumulative knowledge which a closer analysis of these new materials must yield will in the end bring about the extensive modification of the views presented here. Wrong theories

and erroneous speculations, if they are reasonably presented and carefully related to the prevailing interpretations of prehistory, are usually not long in attracting facts which serve to contradict them and open new avenues for investigation, but we must have such theories if we are ever to determine those facts. Only through a continuing evolution of the conceptual framework within which we work can we ever hope to throw new light on New Zealand prehistory. The past as we know it is an ever changing affair, which we ourselves mould, even as the perception of it, however dimly, moulds us and our attitudes towards our own humanity and the diverse roads over which it has travelled.

The growth of this review from the paper with which it began can be traced in part to the reactions of many friends and colleagues who read the earlier versions and the various queries they made about its more controversial or less lucid sections. It has also profited enormously from lectures on the subject to University of Auckland classes in New Zealand History, Stage II Maori Studies, and the archaeology option of Stage II Anthropology in which a captive audience is at least able to demand that the lecturer explain himself fully and clearly. It was in developing an even broader view of all New Zealand prehistory for them, that many of the ideas in the present reviews were first tested until earlier versions

had been entirely re-written and expanded to nearly the present length.

Certain people I owe an individual vote of thanks. Mr W. Abrose, while the initial paper was being written, and Miss J. Davidson, throughout its several revisions, have served both as invaluable sources of information and stern critics. At a later stage discussions with Mr P. W. Gathercole of Otago University, Mr J. Golson of Australian National University, Dr Roger Duff of the Canterbury Museum and Mr R. H. Parker and Mrs Susan Bulmer of the University of Auckland Archaeological Society, resulted in valuable suggestions and emendations, even where they did not subscribe to my interpretations. A thorough job of editing by Miss J. King and additional suggestions by Dr A. G. Buist have improved its presentation immensely. For all of this I am profoundly grateful. It remains to say that I bear the responsibility for suggestions not acted upon and honest differences of opinion interpretation of the evidence as well as those errors of fact that still remain.

That I ever achieved a final product, however, is due largely to the constant encouragement from my wife, Kaye, at those crucial points when I normally would have abandoned the entire project. In fact, were it not for her enthusiasm for the present result, it would probably still be collecting dust in my files along with other manuscripts.

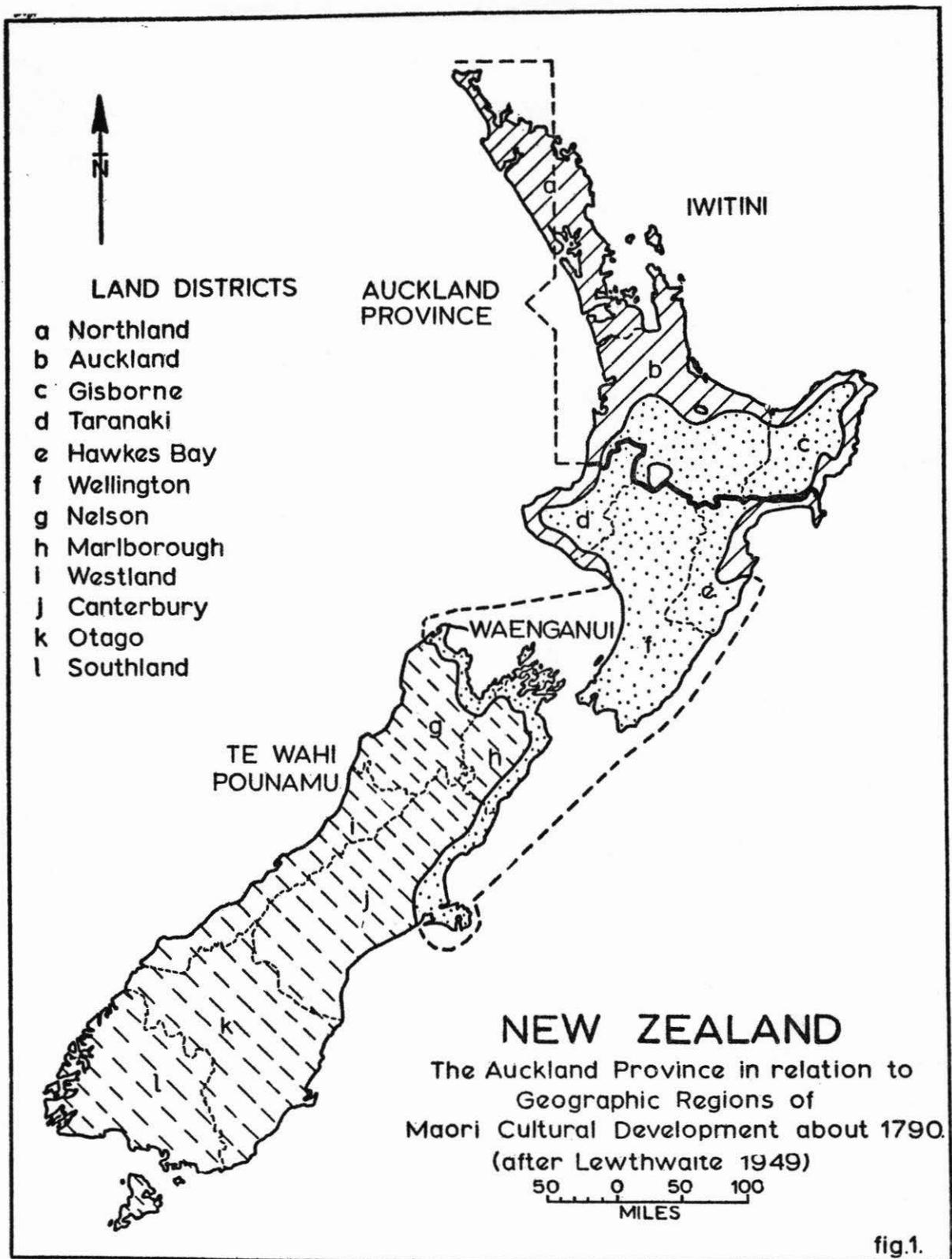


fig.1.

CHAPTER I

NEW ZEALAND PREHISTORY AND THE AUCKLAND PROVINCE

INTRODUCTION

While the Auckland Province in no way forms a cohesive unit, traditionally or through the efforts of current archaeological research, it does embrace much of the region designated by two New Zealand geographers as 'Iwitini' (Cumberland 1949; Lewthwaite 1949). Indeed, if the Taranaki coastal sub-region and the coastal area around Hawkes Bay are excluded, the remainder of 'Iwitini' falls within the scope of this review (see Fig. 1).

Of the three regions into which the above geographers have divided Polynesian New Zealand, 'Iwitini' is that in which the population density was greatest, the food resources most varied and abundant, access to them least restricted, the soils most productive, the climate most favourable, and where the development of a basic Polynesian culture from the central Pacific is generally considered to have reached its climax. Of the remaining regions touched on in this review, only that of Taupo and the localities inland from the east coast fall within the geographer's traditional province of 'Wae-nganui', in which a colder climate, a more rugged landscape, less varied resources, lower agricultural productivity, and a restricted access to the coast all contributed to a smaller and less stable population. The third area, 'Te Wahi Pounamu', covering all but the north and eastern coast of the South Island, is considered least favourable for either the development of a large population or the type of culture related to such concentrations. It is the northern area of the North Island, then, which is likely to exhibit the most complete record of all stages through which an initially Eastern Polynesian culture was transformed into that which we call Maori (Golson 1959a: 33-34).

However, this area has been the focus for controlled excavations only during the last decade of New Zealand's long but uneven record of archaeological investigation. Prior to that, all attempts at archaeological reconstruction of New Zealand's prehistory were based on evidence from farther south, mainly the South Island. The result has been a certain distortion in the perception of the entire sequence simply because the North Island evidence for it was not available. The excavations by the University of Auckland's Archaeological Society have sought to redress this imbalance, and one would be remiss if one did not acknowledge here that much of what follows leans heavily on their efforts. But this review includes far more area than their activities alone embrace, and materials from Gisborne, Rotorua, Whakatane, Taupo, Hamilton and North Auckland are included in relevant sections wherever other archaeologists have contributed to the now rapidly accumulating evidence.

Were this ten years hence, our survey might well be directed toward those regions in the 'Iwitini' geographical province whose prehistory has been found sufficiently distinctive to separate them on purely archaeological criteria. For each region we could proceed to review the sequence, ending with inter-regional comparisons of sequence similarities and differences. However, until those ten or so years have passed, we will find that our regions are ill-defined because archaeologists have worked extensively in one region and not in another (Willey and Phillips 1958: 19). The result is that our spatial and distributional picture is incomplete and true chronological relationships are obscured. The overall set of prehistoric sequences has the aspect of a patchwork quilt.

Because there is no evidence that the Auckland Province was ever isolated from the rest of the country, we may expect that events there will be reflected in other areas. But there is no necessity that the prehistoric sequence for the Auckland Province should parallel exactly the sequence from elsewhere in the country. In fact, ecological division of prehistoric New Zealand into three geographical provinces implies that there is every reason to expect significant differences. Yet to understand the prehistoric sequence in the Auckland Province necessitates reference to events elsewhere in the country, because it is in the similarity of phenomena and processes revealed over a wide area that more local historical sequences gain in credulity and meaning. For this reason, evidence for similar events outside our immediate area of concern must be examined, although the focus of this review is the Auckland Province.

ORGANIZATION OF THE EVIDENCE

Theory

While the theoretical framework within which an archaeologist manipulates his evidence has not always been well understood by those in New Zealand with an interest in Maori prehistory this difficulty is now being overcome. Thus the usefulness of the present theoretical framework is not merely in the new order it imposes on already familiar material, but more importantly in the fact that it permits one to ask crucial questions which simpler formulations begged, obscured, or ignored.

Many earlier formulations of New Zealand prehistory are rooted either in an uncritical use of traditional material or derived from the natural sciences, and for this reason are designed to handle a type of evidence quite different from that recovered by the archaeologist today (Golson 1960a). Because their use in organization of archaeological data leaves many questions unasked or unanswered, a break away from the inherited conceptions of geology and the natural sciences began in England in the 1920s, particularly with Childe (Daniel 1962: 76-77). While its diffusion to New Zealand

has been somewhat delayed, it was predictable that with the arrival of professional archaeologists from the Old and New World they would apply more recent concepts from those areas in the manipulation of their New Zealand data. For this reason, although others may wish to see the retention of older terminologies and theories, archaeologists in New Zealand are now in process of forging their own formulations of its prehistory to ask and answer new questions. Thus, while studies in traditional history, natural history, and geology will continue to be complementary to archaeology in the reconstruction of New Zealand prehistory, each must seek its own body of evidence and handle it within a framework most suited to that discipline. Obvious conflicts between the evidence from complementary fields will then serve to stimulate the healthy controversy that leads to new insights and formulations. Examples of controversies such as the nature of the association between man and various genera and species of *moa*, the introduction of agriculture, the validity of the fleet tradition, and the role of climatic change in the modification of the New Zealand environment spring readily to mind.

In this paper I follow the lead given by Golson (1959a) and work within the concepts of culture, phase, aspect and component. Elsewhere, both he and I have defined the way in which these concepts are applied, and that discussion will not be repeated here (Golson 1959a: 29-36; Green and Shawcross 1962: 214-216). While this attempt may be considered premature by some because our data are insufficient, I feel the attempt worth making if for no other reason that to stimulate a fresh approach to the problems of New Zealand prehistory. Time will judge the profits and pitfalls inherent in the conceptual framework proposed here.

Sources

Much of the discussion that follows would not be necessary were the Auckland Province served with adequate site reports in reasonable proportion to the number of excavations, both good and bad, which have been carried out in

the area. While one may legitimately claim that the archaeologist is hampered by the inveterate fossicker, or the shortness of time during which controlled techniques of investigation have been employed in all areas of New Zealand, in the last analysis the real restriction is the lack of reports or field records that serve to document the material already recovered. In this, the professional is often as much at fault as the amateur. Although archaeologists should be known by the excellence of their excavation reports, and not merely their field-work, this is not the situation in New Zealand today. It is legitimate to expect views of Duff (1963a) on New Zealand prehistory to hold the field while he is the only person to publish fully the evidence for them. Thus, since his excavations at Wairau Bar, New Zealand archaeology has continued to progress rapidly in matters of excavation technique, but these excavations have assisted less than they might in laying an adequate basis for generalization because full site reports for other regions are not available. Nowhere does this situation apply more fully than in the Auckland Province, and yet nowhere has the stress on techniques which should have given rise to precisely such a solid foundation been greater. For these reasons the statements in this essay are to a degree speculative and difficult to assess until that material is fully analyzed and in print. This is the major task that now faces New Zealand's archaeologists.

The Conceptual Framework

Two distinct assemblages reflecting in large part the technological aspects of a culture have been defined in New Zealand. The first, as described by the early explorers and missionaries and subsequently fossilized in museums, has long been called Maori. The second was not so readily identified, first coming to light as chance finds in sites similar to those of the Maori, but consisting of a distinctive range of portable artifacts.

The course of the research leading in the end to the correct recognition of this new material, not merely as a distinctive Southern Culture (Skinner 1921: 76), but as a precursor of

Maori culture, is well described by Duff (1956: 249-81; 1963a) and need not be repeated here. More recent developments have been summarized by Golson and Gathercole (1962). It is sufficient to say that Duff demonstrated to the satisfaction of most, once and for all, that this assemblage was both earlier than Maori and commonly associated with the hunting of *moa*. By detailed comparison and distribution studies he also placed beyond shadow of doubt the contention of Skinner and others that the closest affiliation of the material was with Central and Eastern Polynesian cultural forms. This general succession has now been shown stratigraphically to hold over most of New Zealand from Otago to Auckland (Duff 1956; Golson 1959a; Lockerbie 1959). As a result, we can identify in New Zealand two significantly different artifactual assemblages: one Maori, the other a derivative of an early stage of Eastern Polynesian culture adapted to New Zealand conditions.

The culture represented by these assemblages may be defined in a variety of ways, but at present we may simply outline these and indicate our choice among them. Golson and Gathercole (1962: 274), for instance, have concentrated on the unitary quality of New Zealand prehistory, and argued that these two assemblages are each less than cultures and so can hardly be given cultural status. Their argument is based on Golson's qualitative evaluation of artifact types, drawn largely from the class of portable artifacts, in which they see evidence for only a single culture that has changed insufficiently in time to permit the inference of the evolution of one culture out of another. Thus Golson has characterized New Zealand prehistory as proceeding through a series of developmental phases (1959a: 65-67). The earlier phase he called Archaic and the later Classic Maori. The evidence was not then available to define a suggested proto-Maori phase. In this choice the need to adapt to the new environment of New Zealand and the innovations which are either the result of this adaptation or arise in isolation are seen as the primary processes in the change from one phase to the next within this culture.

A second and widely held view is that a new and sufficiently distinctive culture was brought to New Zealand by later arrivals, who are frequently assumed, by those who hold this position, to be identical with the personnel in the fleet migration of the traditionalists. In this view, the culture of the new arrivals comes to dominate most of the North Island and spreads southward, replacing or amalgamating with the culture of earlier inhabitants.

Given their position of the unitary nature of New Zealand cultural history, Golson and Gathercole (1962: 274) would designate such an event, should it be archaeologically documented, by *sub-cultures* called New Zealand Eastern Polynesian I and II. Here they assume that later arrivals in New Zealand were also from Eastern Polynesia and that their impact on the resident population was insufficient to impose a new cultural orientation which can be given status as a distinct cultural form. A somewhat similar argument based on midden sections from North Island coastal sites and population estimates derived from them has been put forward by Wellman (1962b: 89). Therefore, this archaeological view presents a clear contrast to the traditionalist who would give the new arrivals sufficient dominance to warrant designation as a separate cultural entity, even if both derive from Eastern Polynesia. In point of fact the traditionalists have been rather reluctant to accept the archaeological evidence that the entire earlier cultural assemblage in New Zealand indicates early Eastern Polynesian cultures as the sole source for their pre-fleet cultural assemblages and have always had recourse to so-called Melanesoid elements assumed to derive from elsewhere. The alternative possibility that Melanesoid elements might actually have already been present in the earliest Eastern Polynesian cultures does not seem to have been considered seriously, so that it is only with the coming of age of Polynesian archaeology, and excavations in the Marquesas that such a possibility must be given full consideration (Suggs 1961a; 1961b: 177; Golson 1960a: 392-396). The traditional view then has been the third outlined by Golson and Gathercole,

which is that "the arrival of a quite distinct cultural tradition is responsible for the genesis of Classic Maori Culture" (1962: 274). While this position seems the least likely on the present archaeological evidence, it is only on such conditions that Golson and Gathercole are prepared to grant the final amalgam a distinct cultural status.

On the other hand, I do not find it necessary to adopt the traditional point of view to argue that while the number of new traits introduced were few and the addition to the resident population insignificant, the impact of certain traits brought by only a handful of newcomers could have been sufficient, under certain conditions, to have given rise to a new and distinct culture. If so, the use of a poorly-defined concept of sub-cultures rather than the succinctly defined one of culture in terms consistent with aspect and phase (Golson 1959a: 32-37), fails in my view to give adequate recognition to this evolution of a distinct cultural form. Thus in a typology of cultural contact situations, it is recognised that under certain conditions (Type B4) trait-unit intrusion may bring about the evolution of one cultural form out of another (Willey et al. 1956: 22-23).

Whatever position he may choose to adopt, the archaeologist may not turn solely to tradition to validate it. Rather he must seek to isolate components which exhibit either site or trait-unit intrusion from sources outside New Zealand or demonstrate that elements of Maori culture were all evolved within New Zealand. If intrusive elements are the basis for Maori culture it is most probable that they will appear in the regions of the North Island where Maori culture evolved. But only when they are identified may we judge correctly whether or not their origin also lies within Eastern Polynesia. The subsequent spread throughout New Zealand of the cultural form that results from this intrusion would take place by both site and trait-unit intrusion. In the North Island it would be mainly by site-unit intrusion with fusion and dominance of the intruding culture, but in marginal areas and in much of the South Island trait-unit intrusion with and without dominance might well prevail.

As later discussion will show, so far archaeological evidence is lacking in the Auckland Province for either an intrusion of an entirely new cultural group into this area of New Zealand or the spread, by the type of site-unit intrusion postulated above, of the supposed Maori culture which would result from it. Instead, it is in those areas south of 'Iwitini' that the evidence for site and trait-unit intrusion with dominance of an intruding culture appears. For instance, south of the Banks Peninsula the basic culture remained New Zealand Eastern Polynesian (Southern Culture), but both trait and site unit intrusion of aspects of Maori culture have been suggested (Lockerbie 1959: 87-88, 92-93; Gathercole 1962; Duff 1963a: 33-35). North from Banks Peninsula to the D'Urville Island-Wellington area several authors have again argued for site-unit intrusion, although on widely varying grounds and with conflicting interpretations of the evidence (Duff 1961: 270-273, 288; Keyes 1962: 1-11; Wellman 1962a: 72). Thus the lack of similar evidence for site-unit intrusion in 'Iwitini' suggests that Maori culture there may be the product of local evolution of a distinctive cultural form developing from several regional aspects of New Zealand Eastern Polynesian culture under the impact of one or more traits, which in conditions especially favourable to their elaboration, permitted those groups to achieve a significant new level of cultural integration that may be identified as Maori.

In order to make clear the distinction I am drawing, contrast the evidence for site and trait-unit intrusion from the period of Maori culture with that for the period of European-Maori culture. In the latter case, both archaeological and historical evidence of an intruding and dominant culture is abundant throughout both islands. Traditional and archaeological evidence of a similar sort, although not necessarily as extensive, must also be forthcoming for the prehistoric period if the archaeologist is not to oppose all interpretations of the origin of Maori culture as a result of a "Fleet migration" in which numbers of people with a distinctive culture established themselves in a dominant position over those already resident

in New Zealand. At present, one is inclined to agree with Sharp (1958: 38; 1959: 12) that the concept of "a fleet" is contrary to our knowledge of the ability of the Polynesians as navigators and with Wellman (1962b: 29) that "The large pre-A.D. 1300 population makes it likely that present day Maoris are descendants of the earliest inhabitants, and it is suggested that the traditional "Fleet" canoes, supposedly of A.D. 1350, may have been those of the first people to arrive here".

This leads to a fourth viewpoint not discussed by Golson and Gathecole, but one which is followed in this paper. While also granting the unitary nature of New Zealand prehistory and the continuity of her population it recognizes that the same people may come to bear a new culture by other means than branching off from a parent population or as the result of amalgams that derive from extensive contact between two distinct cultural traditions. Cultural and biological evolution, especially in isolation, may also be of the phyletic type, so that one culture (or species) may evolve out of another in time under certain circumstances and come gradually to spread and replace or influence culturally the earlier form in areas where this development did not occur. In culture, as in biology, this is especially so, should the possession of a single new trait confer on that population a distinctive advantage (Willey 1960: 129). In this instance, the development of agriculture, especially that based on *kumara* through its *introductory and experimental* stages, would have conferred on populations able to practise *systematic* agriculture an advantage which would have precipitated the evolution of a distinct cultural form typified by Golson's Classic Maori, or Skinner's Northern Culture.

In the paragraphs that follow, therefore, I will proceed to argue that the two assemblages at either end of our time scale are sufficiently distinctive within Polynesia to warrant recognition as separate cultures rather than phases of a single culture or two sub-cultures with separate historical origins. The possibility of such an interpretation was clearly recognised by Golson (1959a: 36-47) when he suggested

New Zealand Eastern Polynesian Culture as an alternative to the Archaic phase, and Classic Maori Culture as an alternative to the Classic Maori phase. While the various phases through which it passes are in dispute (Duff 1963b: 65-68; Golson and Gathercole 1962: 274), there seems to be some agreement on the name New Zealand Eastern Polynesian for the culture found initially throughout the North, South and Chatham Islands. Where I differ, is in the assumption that in 'Iwitini' the evolution of a distinctive form of Polynesian culture called Maori can be traced which then spread to other regions of New Zealand or influenced developments in them.

I find a number of reasons for adopting this position. One is that long before Early Eastern Polynesian culture, in New Zealand, ever evolved into anything that we might call Maori, it had to be adapted to the New Zealand environment. These changes were, as Duff (1963b: 66-67) argues, sufficient to develop in New Zealand a culture distinct among the island groups of Eastern Polynesia, which would be called New Zealand Eastern Polynesian culture. Not only does it seem to have been widespread throughout New Zealand, but it seems possible to trace its development through several socio-economic stages in the North Island, and perhaps a slightly different set in the South Island. Granted its distinctiveness within Polynesia and its development into several regional aspects and inter-regional phases, it seems to have every right to status as a culture in the sense in which that is defined by Golson (1959a: 32, 35) and especially as this culture seems to have persisted until the 17th or 18th century in parts of 'Te Wahi Pounamu'.

The more difficult question is whether New Zealand Eastern Polynesian culture ever evolved in its later stages in some region of the North Island into something that is yet another and distinct cultural form in Polynesia. With Skinner (1921) I should maintain that it did and that his early recognition of Northern and Southern Cultures is explicit expression of this fact. Like New Zealand Eastern Polynesian culture, Maori or Northern culture has long been a distinct and easily recognizable form

within Polynesia, different both from its ancestral Eastern Polynesian form in New Zealand and from the cultures of other Polynesian societies at the point of European contact. It also exhibits regional variation (aspects) at contact as Skinner (1921: 75) indicates and presumably similar regional variation will extend back into earlier stages of the development of this Maori culture. In this respect it seems to consist of sequences of related aspects which proceed through two and perhaps more socio-economic phases of development in the Auckland Province and probably elsewhere. Finally, the spread of certain of its regional aspects into the South Island, where it replaced or influenced later aspects of New Zealand Eastern Polynesian culture, would seem to require that we grant the Maori phase full cultural status.

A question related to separate status for Maori culture is the process by which it evolved. On present evidence the following interrelated factors seem relevant. Firstly innovations in isolation as adaptations to a non-tropical environment must have been a continual and not merely an initial source of difference from cultural developments in tropical Polynesia. A second factor was more favourable ecological setting in the 'Iwitini' province of New Zealand for the development of a new form of systematic agriculture within Polynesia (Yen 1961: 339-346) and the ability of the area to support a large and dense population on a wider variety of resources was another. A third may have been the introduction of trait-units as a result of later landfalls by individual canoes. These last may even have been responsible for the introduction of the *kumara*, certain forms of defence around settlements, and some artistic motifs in Maori art, after the initial settlement of the basic population throughout the country.

None of these factors denies the unitary nature of New Zealand prehistory stressed by Golson and Gathercole. It merely states formally my belief that a significant new level of cultural development beyond that of a phase had been achieved in New Zealand, and follow-

ing Willey and Phillips I prefer to call these maximal units cultures (not sub-cultures), and to study the various regional aspects and inter-regional phases of development through which each passed. In the conceptual framework that follows, then, New Zealand prehistory begins with New Zealand Eastern Polynesian culture,

out of which Maori culture and a closely related European-Maori culture evolve. Each culture passes through two or more phases of development and it these phases and their regional aspects within the Auckland Province with which the remainder of this paper is concerned.

CHAPTER II

PHASES IN 'IWITINI'

INTRODUCTION

Unfortunately, the knowledge needed for a detailed seriation based solidly on stratification of the portable artifacts from the two major cultural assemblages is so limited that it is not possible to assess the nature of minor technological changes within the two cultures through successive periods of time. However, even though we do not possess numerical information of the relative, quantitative change in features of portable artifacts, or the frequency with which various types appear from one layer to the next, we may some day expect it (Golson and Gathercole 1963: 128). Golson (1957a: 283) for instance, has demonstrated the possibility of constructing such an evolutionary sequence for certain adze types. In archaeological reconstructions, then, we are forced at this point into using criteria other than those relating to a few finished objects like adzes, ornaments, and fishing gear, simply because most of the well-known portable artifacts belong to the technological aspect of culture in which quantification is necessary to identify the more minute adaptive phases which are common to most cultures that persist for a span of more than several hundred years.

If, as Kroeber (1952: 152-166) suspects, different aspects of culture exhibit different rates and types of evolution, and it is the technological component which most frequently exhibits an accumulative lineal form of evolution which readily diffuses across social and political boundaries, it is no surprise that simple qualitative assessments of the two assemblages have so far failed to perceive these finer divisions. Thus, technological studies at their present state of development seem best suited for tracing the connections between one phase or aspect and another, or assigning site components to their relevant culture, but not in the definition

of smaller cultural entities like aspect and phase.

What I am suggesting is that the present ecological, economic, structural, and settlement pattern criteria may provide a more realistic basis for distinguishing the different temporal phases of development in a cultural tradition. Parker (1962: 223) independently arrived at a somewhat similar position with regard to the structural evidence. He argued that structures were more useful than portable artifacts because they are directly related to the overall stratigraphy, exhibit a wide variety of forms within any functional category, and are likely to reflect changes in social organization.

In part it is due to this similarity in orientation that Parker (1962: 232) and I independently reached rather similar conclusions on a sequence of phases for 'Iwitini'. In the wider context of New Zealand prehistory, the fact that Parker was able to demonstrate parallels in an architectural sequence from the Coromandel and North Taranaki coast is probably a reflection of their general situation within the ecological province of 'Iwitini'. On the other hand, had the comparisons been with sequences from other provinces in New Zealand, the expectations are that the parallels would have been fewer. Thus Duff (1962: 209) has suggested that his Moa-hunter phase in the Canterbury-Marlborough region might be subdivided into Settlement and Developmental sub-phases, but after that the course of South Island prehistory diverged for a time from that in the North Island and so requires the definition of Residual and Proto-Classic sub-phases of a Transitional phase before one reaches the point of intrusion into the South Island of a North Island aspect of the Classic Maori phase. Similarly Lockerbie (1959: 82-85) recognizes a three stratum series of internal changes in technology and economy of a Moa-hunter

cultural sequence in Southern New Zealand which demonstrates the survival there of what I call New Zealand Eastern Polynesian culture to a date well after the inception of Maori culture in the North Island.

It was for such reasons that Golson (1959a: 35) explicitly provided for marginal, interrupted, and isolated sequences of aspects, phases, and sub-phases, rather than trying to force New Zealand prehistory into a single all-embracing scheme. From both the viewpoint of general cultural ecology and the archaeological evidence just cited, it now appears that in at least three separate ecological provinces in New Zealand it will be necessary to deal with different aspects and phases at that point in time after settlement and development, when New Zealand Eastern Polynesian culture begins to diverge and adapt itself to changing environmental situations in each region. This means that within New Zealand it will be necessary to carry out excavations that permit us to define individual regional sequences, because it is unlikely that we may expect any longer to write the prehistory of one region solely on evidence from another. In fact, only if a regional approach to current problems in New Zealand prehistory is undertaken, does it seem possible to explain the obvious cultural differences which marked New Zealand not only at the time of European contact, but at earlier stages in her prehistory as well.

It would be well to emphasize here other points about aspects and phases before going on to summarize those for the Auckland Province. An aspect is composed of a number of site components from a given region which occur within a given period of time. A comparison of these components permits one to infer that their total assemblage clusters sufficiently closely in time so that no marked change takes place between the first and last events implied. Thus the events portray a reasonable picture of the activities of a set of communities within a region at a particular period in time. The use of phase on the other hand implies a stagal approach (in contrast to its use in some American archaeology) in which significant segments in the history of a culture,

identified initially as aspects or socio-economic periods of development within regional sequences of a culture, are grouped together as inter-regional stages of overall cultural development. However, as cultural developments may lag behind or shoot ahead from one region to the next, phases cannot define precise periods of time and are most useful in the initial stages of archaeological investigation. Later, when the regional pre-history of New Zealand becomes better known, it may even be possible to abandon the use of phases and compare aspects from different regions at various points in time in order to trace the ebb and flow of contact, innovation, diffusion, migration and adaptation with greater precision than is permitted by a stagal approach. At that point, phases (as stages) may well give way to aspects (as periods) for the reasons Rowe (1962: 42, 51) has suggested. For the present, however, phases provide a useful summary of the steps through which the prehistory of the Auckland Province has passed in the last thousand or more years.

Because a full characterization of criteria for each of these phases has already been published (Green and Shawcross 1962: 216-219) it has been left to the concluding chapter and they are treated here with different emphasis than in the initial version of this review. Each depends *in part* on the theoretical discussion of community patterning developed by Beardsley *et al.* (1956) and the definitions of the introductory, experimental and systematic stages in prehistoric agriculture in New Zealand outlined by Yen (1961). The reader is referred to those papers for fuller elaboration of the concepts involved.

THE PHASES

Settlement Phase

Sites of this phase in New Zealand are those in which can be recognized evidence for the exploitation of a natural environment not previously modified by a people whose artifact assemblage belongs to an early form of Eastern Polynesian culture undergoing its first adaptation to New Zealand conditions. As there is

neither traditional nor archaeological evidence that the initial settlement was deliberate and the midden evidence suggests that it did not involve large numbers (Wellman 1962b: 88) the size of the first groups would be small. If this position is accepted we find ourselves dealing with the effects of population depletion on a group which had achieved an advanced stage of community patterning in Tropical Polynesia, a group which is now severed from that larger society and placed in relative isolation on a previously uninhabited island where the group size restricts the possible social units that can be formed and affects the range of settlement types that may result. It also seems likely that while initial introductions of tropical Polynesian plants may have failed, because of unfamiliarity with the soils and climate or rigours of the trip (Cumberland 1962a: 160), most groups would find themselves in a situation where population density was low yet with plentiful food resources to be obtained by hunting, gathering and fishing without need of recourse to agriculture. The effects of such changed circumstances would be two: One is that the initial restrictions to wandering would be few until population numbers increased so that the tendency would be for the predominant settlement type to be camps in which all the activities of daily life are found within one site component. The second is a marked change in the basic economy to hunting and gathering so that food production no longer formed the mainstay of the community. In such camp sites materials for tools will generally be of local origin or from a restricted number of the possible sources, as regional trading patterns will not be well established. The impression gained from examining sites along the coast is that a group of Polynesians camped there for the first time in an environment rich in natural resources, and had taken from its abundant avifauna and marine life those items which did not necessitate engaging in food production or in establishing semi-permanent settlement. Inland, while the regional aspects will be slightly different, because the ecological resources were not as varied, and the settlement later in time, the general impression is much the same.

Developmental Phase

Many sites which I place in the Developmental phase are those which Duff would assign to his Moa-hunter phase and Golson to his Archaic phase. Beyond the sound reasons already enumerated by Golson (1959a: 36) for discontinuing the use of the term Moa-hunter, additional confusion would be created by its retention in the conceptual scheme adopted here, because the hunting of *moa* would have to be applied as a primary item among a set of criteria in the definition of the first or settlement phase, but could not be used for subsequent phases even though the hunting of *moa* continues (Green and Shawcross 1962: 215-216). Also, I do not believe that it can be demonstrated that hunting of *moa* outweighs all other criteria in defining change within New Zealand Eastern Polynesian culture and prefer to base definitions of phases on the first appearance of a set of new criteria for each successive phase, rather than on the presence or absence of a single diagnostic trait like *moa* hunting or the possession of a particular adze type. On the other hand I do not wish to use Golson's term Archaic, because it is based on a qualitative assessment of certain portable artifacts and at present does not permit a finer subdivision of the materials represented. For this reason, I find that Golson's application of the term Archaic has resulted in an overexpanded stage within which one can recognize several successive phases and regional aspects in the Auckland Province. Thus, to avoid confusion with this use of Archaic (which both Parker and I independently subdivided), similar materials were called Archaic A by Parker (1962: 232) and Developmental by myself (Green and Shawcross 1962: 218).

With the onset of the Developmental phase, population increase, expansion of trade and evidence of the first major modification of the native New Zealand environment by man, permit the definition of a new phase of New Zealand Eastern Polynesian culture. Not only does this phase appear to be widespread in the Auckland Province, but it also appears to be represented in most regions of New Zealand, although each presents sufficient variation to

make the definition of regional aspects likely. However, underlying these variations is the use of a range of portable artifact types in a variety of New Zealand materials, some of which were widely disseminated. They indicate both an exchange of basic ideas in artifact manufacture and extensive trade in raw materials like obsidian and argillite. Moreover, many types are beautifully rendered in the new media provided by the now well-explored New Zealand environment. Increasing population and modification of the natural vegetation and avifauna, probably by fire (Cumberland 1961: 142; 1962a: Fig. 1; 1962b: 128-132), means that resource zones are more widely separated and must be exploited more intensively. These factors precipitate a more sedentary existence in which the community spends portions of each year shifting around in a locality, but also resting periodically at a settlement or "central base" to which it may or may not return in subsequent years (Beardsley *et al.* 1956: 138).

Midden deposits now recur in successive layers at short intervals within a locality and refuse may accumulate to the depth of several feet, while burials may occur within or near these site components. Most of the manufacturing continues to take place within the same area as the cooking and preparation of the food, so that middens from this phase are rich in portable artifacts. The semi-permanent nature of settlement within a locality means evidence for more substantial housing, and the earliest known pit dwelling settlements put in their appearance. While separate and functionally distinctive storage facilities which mark fully developed agricultural communities are not yet recorded for this phase, there is some evidence from storage units attached to dwelling components in the Auckland Province that successful introductions of some Polynesian food plants had occurred. Thus, by the later portion of this phase it seems likely that the introductory stage in Polynesian New Zealand agriculture as defined by Yen (1961: 345) had begun. In the North Island this event would be somewhat prior to the 14th century, placing it in climatic circumstances, especially with respect to frequency of frosts, more favourable to the intro-

duction of tropical food plants, since conditions at that time would probably permit them to be grown and propagated vegetatively much as they were and still are in tropical Eastern Polynesia (Yen 1961: 338-339).

In this respect it is interesting to note that the proposed date is not far removed in time from the supposed introduction of various food plants according to the traditional evidence (Buck 1950: 61). Moreover, such items would fall within Vayda's (1959: 825) category of useful innovations that would be readily adopted wherever introduced without respect to either the size of the group introducing or receiving them, so that a single canoe load or several separate canoes is all that need be postulated.

In the earlier part of this phase, and doubtless in many regions throughout the phase, the economy is based on an efficient exploitation of a wide variety of native resources. Agriculture, where it existed, was a supplementary source of food, not a mainstay in the diet. Those species of *moa* which survived the initial onslaught were now hunted extensively, but no longer do the kills exhibit the range in genera and species taken, so that one or two forms favoured by the local and somewhat modified ecological situation predominate. Similarly, there is a continued reliance on marine fauna, including use of a wider range of shellfish in which more attention is paid to various mudflat species.

Experimental Phase

Man was faced with a deteriorating climate marked by more frequent frosts, and with a dwindling natural supply of food as he and his accompanying parasites gradually brought about the decrease to extinction of much native fauna and flora except in marginal situations inland. Thus it became necessary for him to focus increasing attention on the propagation and storage of *kumara*, the one plant that could provide an adequate agricultural basis for the maintenance of larger populations in New Zealand. This required a technical innovation which may have come about by loss of successive crops to more frequent and severe frosts leading to the exploitation of the 'seed' phase

of the sweet potato through its annual propagation from the root rather than as a vegetatively propagated perennial as in the islands (Yen 1961: 339). This made it possible to develop the raising of the plant as an annual crop to a point where it was suitable for systematic agriculture under New Zealand conditions.

These first experimental steps toward systematic agriculture also necessitated adequate storage units, especially in a deteriorating climate, so that separate storage pits, many complete with drains, are in evidence. While some have suggested that taro may also have been stored in pits, it appears that certain strains were sufficiently adaptive to overwinter in the ground (Yen 1961: 345). At the same time in those few sites known to us from this phase, the style of the dwelling unit alters from that of the previous phase. While burials still occur in the area of the site, extensive layering in beach middens of this phase indicate that shifting of the population within the locality continues to be a regular phenomenon. The possibility of fortification may not be discounted although no sign of it has yet appeared.

The *moa*, sea mammals, yam, *ti* and probably taro remain as relatively unimportant items in the diet and *kumara* agriculture which had hitherto assumed an unimportant role now comes increasingly to the fore. Although concentration of the food debris in the middens is not as great as in later periods and evidence for the manufacture of artifacts is still found in them, the shell and bone content is closer to that of later phases. In sum, the evidence demonstrates the ability of the people to live in a now much modified local environment, where possible depending on agriculture to maintain an increasing population. Where this was not possible, the aspects and phases of a different character are to be expected.

Proto Maori (Pa or Village Maori) Phase

After a period of experimentation the development of systematic agriculture based on the sweet potato (Yen 1961: 346) paved the way for stability of the population within a locality and the erection of large fortified sites (*pa*) in

which are found new elaborations of various architectural forms and an accumulation in certain areas of deep deposits of midden refuse consisting largely of mudflat species of shellfish. The shifting nature of *kumara* cultivation, however, seems to have required the semi-permanent type of community patterning in which the central village is established in successive locations, occupying each for a period of years (Beardsley *et al.* 1956: 140). Population pressure and an increase in warfare necessary to maintain one's rights to suitable land cleared for agriculture may have further contributed to this pattern (Vayda 1960: 113-116). As I have already discussed the relevance and application of this type of community patterning to the archaeological situation that obtains in the Kauri Point area (Green 1963b: 144-145) it is not necessary to develop this theme further here.

The economic orientation of this phase toward agriculture is consistent with the rapid pace at which deforestation has proceeded (Cumberland 1961: 146; 1962b: Fig. 3). By now the *moa* has disappeared completely from all but inland regions, and hunting in general has assumed a secondary role in the economy. Gathering on the other hand continues and thousands of shellfish are harvested annually from the mudflats and beaches, their shells accumulating to great depths in restricted areas associated with the main site, or as beach and dry land shell middens. These middens, however, lack the items of portable artifact manufacture formerly associated with them.

The central settlement is fortified by a defensive system of earthworks, and its structures arranged internally according to local social organization. Thus, the dwelling and storage units exhibit characteristic distributions within the site, in which several forms of storage pits may also be noted. However, other site components consisting of smaller undefended settlement or beach camps for fishing and gathering and cooking shellfish and fish are to be expected, and all of these reflect the diversity of social units and settlement types that are possible among expanded populations that do not dwell full time in permanent villages.

At various times I have designated this phase (which I expect will one day be further subdivided) as Pa or Village Maori, while Parker (1962: 232) has called it Early Maori, and Golson (1959a: 66) has suggested the term 'proto-Maori'. As the nature of its portable artifact assemblage is still not well defined but is probably transitional to that of Classic Maori, I here return to Golson's term. According to him this phase would be an earlier portion or "segment of the culture sequence of that region (or regions) where Classic Maori is the logical product of cultural development, though it will be reflected in outside regions in the course of inter-regional contact." (Golson 1959a: 66-67).

Classic Maori Phase

This phase "represents the fullest development of pre-historic culture in New Zealand" (Golson 1959a: 47). On the present evidence it is the two or three hundred years of prior evolution within Maori culture in the northern part of the North Island at the Proto Maori level that makes possible this final stage in socio-economic development. Therefore, whatever the ultimate origins of Maori culture may prove to be, the difference between the Classic Maori and earlier phases will be its socio-economic complexity and artifactual elaboration in relation to the earlier assemblage from which it was derived. As "we know more about Classic Maori than we shall know about any other phase of prehistoric New Zealand culture, because with the arrival of literate Europeans, prehistory was 'caught alive'" (Golson 1959a: 47), we may expect further enrichment of this complexity and elaboration from sources other than archaeology. On the other hand our definition will need to be capable of verification archaeologically, and to date our knowledge of this phase from proper excavation is meagre. The result is that the picture drawn by Golson (1959a: 47-62) of Classic Maori was necessarily composite and a Proto Maori phase impossible to define. Even now, with much additional evidence, the distinction between the two phases is not always easy. Thus just because portable artifacts assigned by Golson to Classic

Maori occur in the site, it does not automatically follow that many Classic Maori artifact forms had their origin in earlier phases of Maori culture.

For me the Classic Maori phase is represented by the coalescence of populations within a region, so that some now dwell permanently in large internally differentiated settlements based on a greater complexity in the social organization. In some areas a pattern of main and satellite *pa* can even be recognized along with the usual hamlets and camping places. By now the processes of segmentation and stratification among the major social groups should have proceeded far enough to be recognizable in the archaeological evidence of the internal arrangements in the *pa* and in the appearance of structures devoted to special activities.

From the point of view of artifacts, Classic Maori will be closely related to those styles which are late and more highly elaborated in the 'Iwitini' area than elsewhere in New Zealand. Certain types may even be wholly restricted to the phase. For instance, the full range of *pa* known to us from the field evidence were doubtless some time in their evolution, and certain types must belong to a later phase than others. I have suggested the artificial island or swamp *pa* as a Classic Maori type, while Golson has made a similar proposal for the ring ditch *pa* (Golson 1961a: 40). The rendering in greenstone of certain ornaments like the *hei tiki* may only occur in this or the following European Maori phase. It is also probable that the development of field systems bounded by stone rows, drainage systems in swampy ground, and the creation of large areas of 'made soils' are phenomena which reached their peak in this phase, for the emphasis would have to be on an intensified form of systematic agriculture to maintain the large populations indicated. Thus Classic Maori will be concentrated in those areas of New Zealand in which Maori culture had its origin and which also are especially favourable for a dense and potentially stable population. Elsewhere, a late sub-phase of proto-Maori settlement may re-

main the mode and Classic Developments be reflected in inter-regional contact only.

Early European Maori Phase

Intensive European contact had a profound effect on Maori culture, its economy, its social and political life. These changes were probably far more reaching than we suspect at present and much that is recorded in the historical and ethnological literature actually relates to this period and not the one before. Even if these changes were not recorded historically in European records or archaeologically by trade goods of a durable nature, they would still be evident in changes in the form of the *pa*, in the shifts in settlement pattern and similar phenomena. Even if the historical evidence were lacking the tremendous changes in technology brought about by steel tools and the gun, and in the economy by European crops and pigs (Hargreaves 1963), and as a consequence of these a shift in the settlement pattern (Groube 1962), provide more than sufficient evidence on which to postulate a major site-unit intrusion by a non-related culture. This type of site unit intrusion in which a different culture (B) appears as one or more site units intruding into an area previously held by A and both cultures maintaining themselves separately without fusion, but culture A borrowing heavily from B, was considered but could not be properly documented in the classification of cultural contact situations (Willey *et al.* 1956: 23-24). It must be fairly common in the Pacific, however, as this is the point where Pacific prehistory ties in with European history, and it is the job of the archaeologist as well as the historian to document this contact.

Other Ecological Considerations

Cutting through the theoretical framework outlined above are a number of local micro-environmental differences which must be kept in mind in assessing the cultural position of an individual site. There are also broader divisions which may be summarized under the categories of coastal, inland, and island.

In this situation the coastal situation has been taken as our general case and the other

two as special cases. On the coastal sites a full exploitation of both land and sea environments is possible. On off-shore islands, particularly those off the east coast of the Auckland Province, the land and faunal environments may present sufficiently altered conditions to warrant a regional recognition. On many of these islands, for instance, the climate is warmer but the area suitable for agriculture may be very restricted, and while the *moa* may have been lacking through natural causes, the sea birds and certain marine mammals may be far more abundant. These differences, of course, may well produce regional variation away from the norm for the phase in the cultural content of each aspect.

In inland situations other ecological factors apply, but the general situation is very similar. Thus fishing, or gathering of shell-fish, may well be replaced by heavier dependence on the products of the forest, especially the smaller *moa* and other birds. Related changes in the artifact inventory are also to be expected. Again, these factors may be expected to produce regional variation in the cultural content of each aspect away from the norm for the phase.

Let me conclude this section by stating that this conceptual framework is a theoretical construction which I have derived from a survey of the existing literature, not something discovered simply by excavating sites. Facts will not organize themselves, they are organized by the methodology one employs. The present framework is thus based on certain fundamental assumptions about culture generally and logical premises about the relationships among its various parts. They have been applied to the New Zealand material, to sort from it a number of testable hypotheses which further archaeological evidence may support or modify. One or all of them may prove to be in error, but they do serve as a new interpretation of the facts as I know them, and they ask, I believe, questions on which older conceptions remained silent. In the remainder of this review I will attempt to organize the facts from the Auckland Province within this framework, in order to give it a more substantial basis on which to stand.

CHAPTER III

NEW ZEALAND EASTERN POLYNESIAN CULTURE: THE SEQUENCE FROM THE AUCKLAND PROVINCE*

INTRODUCTION

Four sites in the Auckland Province may belong to the Settlement Phase, but only one of them is coastal and typical of the norm for this phase. However, the discovery of sites belonging to the Developmental Phase is increasing rapidly not only in the Auckland Province but throughout the North Island. In the Auckland Province they occur probably in the North Auckland region and definitely in the Auckland Isthmus and off-shore islands, the Taupo region, and the Coromandel Coast, but are best known all along the Coromandel Coast. Wellman's (1962b) coastal sections for the whole area, especially those from the Bay of Plenty to Gisborne, are indicative of numerous other sites belonging either to this or less often to the other two phases of New Zealand Eastern Polynesian culture. Only extensive excavations will determine precise assignments.

All sites which can be confidently assigned to the Experimental phase are from the Coromandel Coast. These sites are limited in number, no doubt a reflection of the fact that they are not marked by beach middens rich in tell-tale *moa* bone like those of earlier phases, so that to identify them fully requires extensive and systematic excavation. As a result, only the pioneering work by Golson at Sarah's Gully (N 40/9) and Parker at Skipper's Ridge (N 40/7) have exposed sufficient portions of the settlement areas associated with these beach midden to make it possible to assign the sites to this phase with any confidence. Elsewhere there are beach middens which present a

paucity of evidence for the hunting of *moa*, a fair proportion of mudflat species among the shell-fish, and occasional items in the artifact assemblage that are thought to be late in the sequence. This suggests that the middens belong to this phase, but investigation of the settlement component of the community which gave rise to them is called for first.

THE SEQUENCE FROM THE AUCKLAND PROVINCE

Settlement Phase

Although I was inclined, when writing the site report on Tairua (N 44/2), to place Layer 2 in that site within the Coromandel Aspect of the Archaic phase (Smart and Green 1962: 264), I believe the conceptual framework used here demands its removal from that aspect to a still undefined aspect of the Settlement phase in the Bay of Plenty. I have tentatively used "Bay of Plenty" as the name for that aspect because regions belonging to the earliest phase may be expected to be extensive and because tradition suggests that one of the first areas of settlement may have occurred in this region. It was also selected as the result of recent information on the obsidian source at Mayor Island. This source, it can now be demonstrated, was the first one discovered, for in the earliest sites the proportion of Mayor Island obsidian present is always higher than that from local sources even when a local source is close at hand. Also, Mayor Island obsidian seems to be found in nearly every early site known in New Zealand regardless of its location, suggesting an early exploration and a primacy for settlement in the Bay of Plenty region.

*Sites in the Auckland Province mentioned in this chapter are all marked on maps of Figure 2.

PRINCIPAL SITES AND KNOWN QUARRY SOURCES IN THE AUCKLAND PROVINCE WITH EVIDENCE FOR NEW ZEALAND EASTERN POLYNESIAN CULTURE.

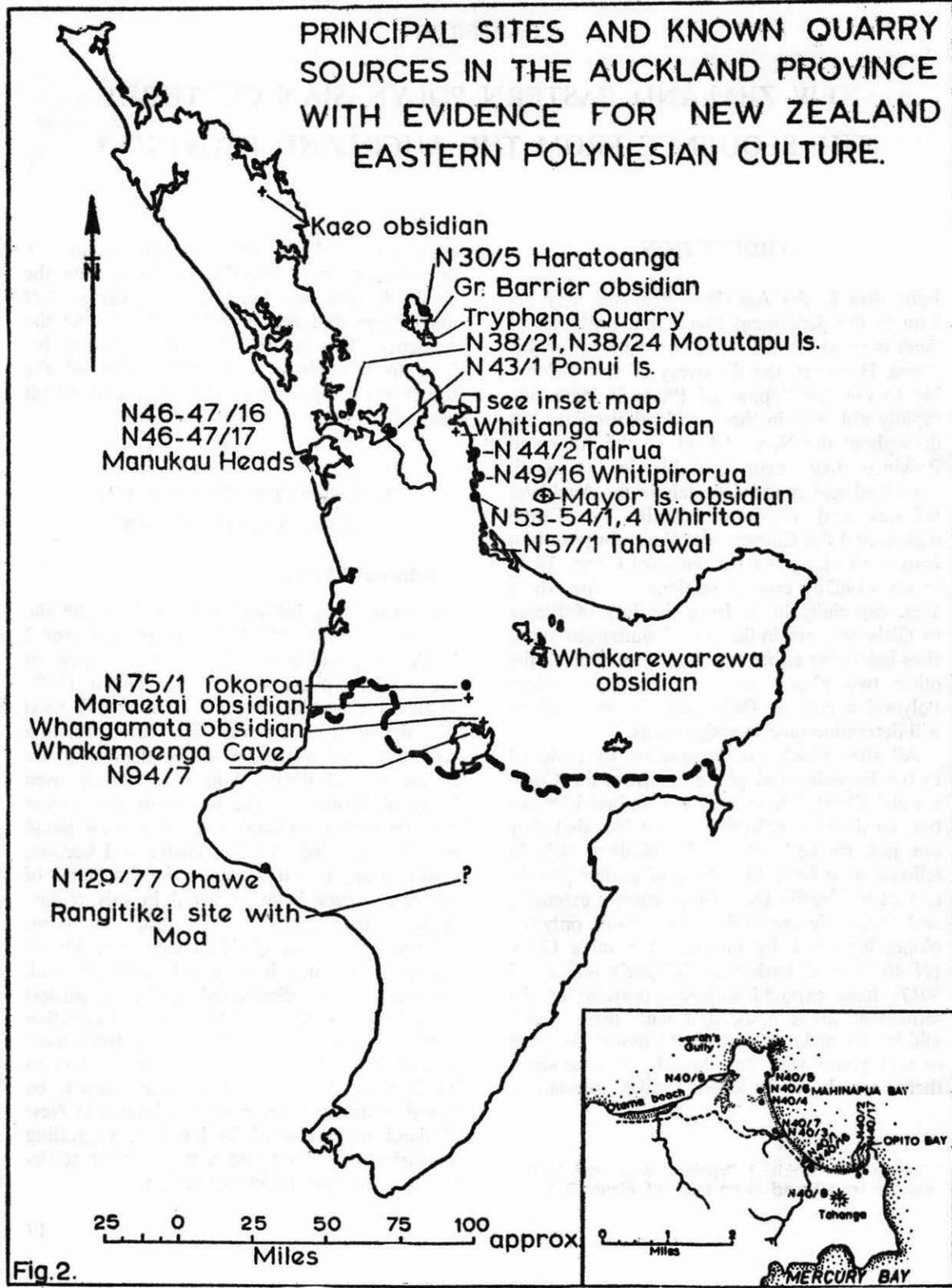


Fig.2.

Layer 2 at Tairua (N 44/2) corresponds well with the basic criteria for a camp site of the Settlement phase. The layer is thin, and settlement is not again repeated on the site until far later in the sequence. The structural evidence is limited to a few postholes, pits and one large oven. An analysis of the faunal evidence shows that a wide range of *moa* genera and species were encountered and killed by man as well as a variety of sea mammals and numbers of different birds deriving from at least three distinct ecological niches. The dog is also present. Among the shellfish, only certain of the larger, rocky foreshore species seem to have been exploited, a preference which may be explained by the fact that these forms were most similar in type and habit to those taken by Polynesians in their former island homes (Smart and Green 1962: 248-49, 254-263).

The portable artifactual assemblage indicates that a full range of manufacturing activities took place in the area of the site and that most of the materials utilized were of local origin. All the obsidian is from Mayor Island, except for one piece which may not have come from Taupo as originally thought, but from a local source on the Coromandel coast (Smart and Green 1962: 249-254).

Although we cannot point to other *coastal* sites of the settlement phase in the Auckland province, Ohawe (N 129/77) on the south Taranaki coast (Buist 1962: 234-235) and the lowest stratum in Pounawea and perhaps Papatowai (Lockerbie 1959: 82-84) in south Otago would seem to qualify for inclusion in this phase, even though each may be expected to belong to separate regional aspects. However, while these sites may represent the norm for coastal camps in this phase, in the area under review sites of a similar kind on off-shore islands or in inland situations may be expected to deviate from it in several predictable ways.

Recent investigations at Haratonga Bay, Great Barrier Island, revealed there a beach midden (N 30/5) providing evidence for an occupation belonging either to the Settlement or early Developmental phase in an off-shore island sequence (Spring-Rice 1963). The fact

that the obsidian recovered was of Mayor Island origin, despite the presence of a local source which predominates in all later sites on the island and which is traded widely to *pa* sites in the Auckland Isthmus region, strongly suggests that the site belongs to a period of initial settlement. The presence in the midden of *moa* (which may or may not prove to be indigenous to the island) and the range and kind of shellfish recovered from the midden, including many rocky shore types not easily obtained today in that locality, are supporting criteria for an early but not a specific assignment. The wide variety of birds may provide more positive support when they can be compared precisely with similar middens from other off-shore islands like Ponui and Motutapu. For instance, a comparison of material from this site with that from under the ash at the Sunde site (N 38/24) on Motutapu, which could easily belong to the Settlement phase, and that above the ash, which is probably of the Developmental phase or later, will help to clarify the position of this site, and as well the nature of the regional sequence to be expected in general from sites of New Zealand Eastern Polynesian culture on these off-shore islands.

Inland, in an ecological situation which borders on the "Waenganui" province, if it is not included in it, there is a site near Tokoroa (N 75/1) with Archaic artifacts associated with the hunting of *moa*, while within 'Waenganui' on the shores of Lake Taupo there is Whakamoenga Cave (N 94/7) with a similar type of evidence. These two, and a third site on a terrace of the Rangitikei River (Batley 1960: 16) form the core of the evidence now accumulating for settlement inland by people with a form of New Zealand Eastern Polynesian culture hunting a restricted range of smaller *moa*.

At N 75/1 near Tokoroa the investigations clearly suggest a camp type settlement which terminated further development of an existing podsol by clearing the locality of its rimu forest (Cook and Green 1962). Again, despite the short distance to the Taupo or Lake Maratai obsidian sources, nearly all of this material in

the site derives from Mayor Island. The excavations revealed one principal oven, several pits, a few post holes and a shallow drain all associated with a thin cultural layer. From the oven a number of bones belonging to one species of *moa*, *Euryapteryx exilis*, have been identified, while the adzes ploughed from the site have been of an Archaic type. Whereas in N 30/5 on Great Barrier items of fishing gear or the tools for manufacturing are in evidence, here these artifacts and the shellfish are absent. Again, for ecological reasons the range of *moa* available is restricted and only a single form appears in the site. These factors serve to emphasize the theoretical point made earlier that one must take those cross-cutting ecological factors into account when assessing the cultural position of a site. It is also likely that the Tokoroa site is not contemporary with, but later in time than, either the Tairua or Harataonga sites, thus making clear a second theoretical point that while sites of the same phase need not be contemporary, the regional aspects to which each belongs if arranged with strict regard to their precise chronological position would show clearly the courses which the settlement of New Zealand or any similar cultural phenomena followed.

Whakamoenga Cave, Lake Taupo, probably records in its first occupation, layers belonging to the initial settlement of that region. Again, like the Tokoroa site, all obsidian derives from one source, but this time one in the immediate vicinity. Again, items among the portable artifacts like files, drills and *moa* bone fishhooks are lacking and the range of *moa* restricted to smaller bush forms. A complete faunal analysis will eventually reveal the degree to which general reliance was on birds of the bush, and fish and freshwater mussels from the lake. While some marine shells seem to have been imported at first, the general range of shellfish common to coastal camps is, of course, lacking. At the inception of occupation, however, a camp site in a small area behind the natural barrier of fallen rocks at the cave mouth seems to be indicated, where most of the living activities took place (Hosking 1962: 29).

Developmental Phase

Duff (1956: 250) once described the Coromandel region as "a virtual 'island' of discovered artifacts of the Moa-hunter type", so it is not surprising to find that the region has produced the most extensive evidence within the Auckland Province of this phase. On the other hand, sufficient numbers of sites belonging to this phase are known from other regions, so that a more balanced picture now emerges.

The Coromandel aspect has already been defined elsewhere (Smart and Green 1962: 264). However, in the present conceptual framework it needs some revision as it is now clear that we are dealing with more than one aspect, a fact which was then recognized but not explored. The sites assembled here under the Coromandel aspect do not display a full range of *moa* genera in any one site. On the other hand they indicate, as the first find did in 1865, that species of *Dinornis* are among the forms of *moa* hunted in this phase, in contrast with the situation at many, but not all, South Island sites of the same time. The range of artifacts associated with these sites is not quite as full or as rich as the assemblage from Wairau Bar, but a substantial number of parallels between the two are present, more than sufficient to indicate that they must derive from a common Eastern Polynesian culture now well adapted to New Zealand conditions. The differences between the Coromandel aspect and that to which Wairau Bar belongs are in more minute features like styles of the line attachment for one-piece hooks in *moa* bone or frequency of use of items like canine teeth from large seals at Wairau Bar.

Finally, the Coromandel aspect is marked by evidence for semi-permanent settlements in the form of substantial, semi-subterranean pit dwellings found on low ridges behind the ordinary beach middens. Although the people retain a preference for rocky shore species of shellfish, it is not so marked as in the Settlement phase and in other regions the situation may be quite different. While in theory agriculture should begin by the end of this period (and here we have to consider the possibility that the rectangular underground store pits,

some attached to the dwellings, are an indication of food storage), we have no direct evidence for it. But then have we really looked for it, and in the right places?

Materials manufactured into artifacts appear to display a familiarity with a wide range of sources, not all of them local. Materials for adzes from the Tahanga quarry (N 40/8) are widespread in flaking floors belonging to this aspect, but baked argillite and similar materials from outside the region are occasionally present. Although Mayor Island obsidian still predominates in sites of this aspect, obsidians, probably from a local source within the region, are also common.

On Opito Beach it is possible to identify a number of sites belonging to this phase (Green 1963a). The first, Cormack's midden, was reported in 1856; most of the rest have been investigated in the last five years. Of these, the most important site is Opito (N 40/3), in which layers 4B and 4C (particularly the last) are assigned to this aspect and phase (Golson 1959a: 44-45; Green 1963a: 59-60). Other Opito middens which probably contain one or more occupations belonging to this aspect are N 40/4, N 40/16, and N 40/2 (Green 1963a: 62-64).

Elsewhere on the coast, the lower five layers of the Sarah's Gully Settlement (N 40/9) (Green 1963a: 65-66), the main beach site (N 49/16) at Whitipiroua, and probably a site like N 53-54/1 at Whiritoa (Green 1959: 23-24) are further examples of this aspect.

Two workshops for specialized activities may be assigned to this phase. However, neither of them has been sufficiently investigated to reveal their full stratigraphic range, either from the materials found in them or from the presence of materials from them in other sites of the Coromandel aspect. One is a working floor for dentalium shell (N 40/5) and the other is the Tahanga adze quarry (N 40/8) (Green 1963a: 58; Shaw 1963: 34-35) and both indicate that in this and later phases sites for specialized activities are to be expected. Both these sites, by showing that specialized tasks are no longer performed within the household or community living areas, assist us in our

reconstructions of the activities of a community. In this phase and the next the dwelling components for a community occupy low-lying ridges behind the living area and working floor on the beach. To find this component of the community's activity it is therefore necessary for us to excavate elsewhere than in middens along the beach front rich in portable artifacts. If we persist in a current practice of only excavating 'early' beach middens and 'late' *pa* sites, and basing our interpretations of New Zealand prehistory solely on them, the result will surely distort the picture.

On all lines of inquiry pursued so far, Parker's (1962: 224) and my equating of buttress pits and other materials of level I from Skipper's Ridge (N 40/7) with the Archaic artifacts in layer 4C in the Opito site (N 40/3) on the beach in front, seems to be correct. Confirmation of our expectation of deep pit structures at this time is furnished by the structural evidence from the next to earliest layer at Sarah's Gully. Here partial remains of a "structure with sunken floor and postholes" were encountered (Golson 1959b: 14). A radiocarbon date for a post associated with this structure is 810 ± 50 radiocarbon years ago, but the date is likely to be too old by the proportion of sample that was derived from wood toward the centre of the tree (Green 1963a: 66). Given a date of 650 ± 50 radiocarbon years ago for a sample from the bottom layer (Golson 1959a: 45), a date toward the end of the 13th century thus seems a fairly reasonable estimate for this aspect.

Golson's (1959a: 44, fig. 13) distribution study of certain Archaic adze types in the Auckland Province shows two other regions, the Auckland Isthmus including the east coast off-shore islands, and the North Cape, to have a concentration of find spots of these forms. It is not surprising then to discover that most of the remaining Developmental phase sites have been reported from these two areas.

In Northland there have been no reports of modern excavations. The most recent publications on materials and sites of this age are those by Fairfield (1961), Wellman (1962b) and Robinson (1963). Until sites in the region are

fully investigated, it is intriguing to ask whether man and the *moa* were associated there, as they seem to have been in the remainder of the North Island during this phase.

Evidence of this phase in the region of the Auckland Isthmus and off-shore islands is accumulating more rapidly. Jolly (1960) first drew attention to the Manukau Heads and to Archaic artifacts from Wattle Bay in the Bramley collection. Both the adzes and other materials in that collection and those recovered by excavations in the two sites on a small bay just east of Wattle Bay encourage the view that here we have an additional locality for sites of the Developmental Phase. Excavations at the "University site" (N 46-47/16) produced a hogbacked chisel, while those at the Bramley site (N 46-47/17) yielded two 1A type adzes and one each of the following types: 2C, 3, 3A, 3B and 4A. A number of these adzes are of imported baked argillites, and this, along with the presence of obsidian from at least two sources, but with Mayor Island source predominating, suggest we are dealing with a Developmental phase site of an as yet undefined aspect. The sites yield more dog than *moa* bone, the one piece of identifiable *moa* bone encountered probably being *Dinornis giganteus* (Scarlett 1962: 246). But the deposit generally is not favourable to the preservation of either bone or shell.

Both sites, which may actually be related, are under up to twelve feet of sand. Below this level at the "University site" two thin habitation layers were encountered, the lowest of which is not very far above the spring high tide (Ambrose 1961: 53). The layers seem to represent living and working areas, the only structural remains being two post holes in the upper midden of the "University site".

Settlement phase materials from Motutapu, if they are to be found, will occur below the Rangitoto ash dating to 1200 A.D. Limited evidence of such expectations were known to us both from tests under the ash at the Pig Bay site (N 38/21) and surface examinations of the Sunde site (N 38/24) (Golson and Brothers 1959: 7). More recent excavations at the Sunde site promise to clarify this prob-

lem. Not long after the primary eruption of Rangitoto and deposit of the major ash deposit on Motutapu, the people returned to the island and settled again on dunes of wind-blown ash and beach sand at both the Pig Bay and Sunde sites. At the Pig Bay site the sequence of occupation has been described briefly (Golson and Brothers 1959; Brothers and Golson 1959; Golson 1959a: 45-46).

As dunes block the outlet of the stream at Pig Bay and form a temporary lake, a long succession of recurring occupations near the lake edge alternate with periodic flooding of the living area. This sequence, presumably with little modification culturally or geologically, occupies the periods of Layers 4-8. On the limited published evidence, they all seem to belong to an off-shore aspect of the Developmental phase.

The cultural evidence, however, is also limited, by the fact that no report has ever appeared on the midden, faunal remains, shellfish, or stone and obsidian flakes that were found. As is common with sites on off-shore islands, no sign of extensive hunting of *moa* is found, although some *moa* bone occurs in the site. The primary evidence then is based largely on the finished adzes. Two of type 2C and one of type 1A were found in layer 7, a type 1A and 5 in layer 4, and type 4A at most levels (Brothers and Golson 1959: 576). It is supported by a range of fishing gear, including two lure hook shanks, a small number of one-piece bait hooks and three halves from composite bait hooks whose stratigraphic position is not indicated (Golson 1959a: 46).

After layer 8, the last appearance of a lake bed, evidence of occupation is "characterized by a few thin middens of shell and fishbone, with virtually no associated material culture". (Brothers and Golson 1959: 575). At this time the stream cuts through the dunes and the lake disappears.

A *hangi* dug from the surface of layer 8, through it and into layer 7, provides a rough estimate of a terminal date of 280 ± 40 radiocarbon years ago. Depending on how many years one thinks elapsed between the deposition of layer 8 by the lake, its disappearance,

and the cutting of the *hangi*, one has various 16th or 17th century dates for a terminal stage of New Zealand Eastern Polynesian culture persisting relatively intact on this island. What we appear to have here, and perhaps on other of these off-shore islands, is a delayed sequence, in which the Experimental phase may well be missing and in which aspects belonging to the Proto Maori phase intrude only after they have become well developed on the mainland.

A third site (N 43/1) which contains materials that I would assign to the Developmental phase has recently been reported from Ponui Island (Nicholls 1963). Here the materials in layer and level III suggest the typical range of criteria for occupation of the Developmental phase. It is probably to be compared with others on the off-shore islands.

Assessing the material assembled for the Auckland Isthmus region, we may expect some day to be able to define two aspects—one for the mainland and the other for the off-shore islands. It would be unwise to attempt their definition at this point, however.

In the 'Waenganui' Province, one site probably holds evidence for the Developmental phase stratified above a Settlement phase occupation. This is the Whakamoenga cave (N 94/7) on the shores of Lake Taupo. Here, after initial camp occupations and a major rock fall, there is a build-up of a second and more extensive occupation layer containing obsidian, freshwater mussel shell, *moa* bone and artifacts, which in turn is sealed in by yet another major rockfall (Hosking 1962: 29). While the layer is probably Developmental phase in our conceptual scheme, a more precise assignment will have to await a full analysis of the regional and cultural differences which it displays.

Experimental Phase

Although various other beach midden assemblages may eventually be shown to belong to this phase, only on the Coromandel Coast are we able to assign sites to it with any confidence. In this case those sites are also assigned to a Sarah's Gully aspect of the phase because the Sarah's Gully Settlement (N 40/9) may

stand as a type site for this regional aspect (Golson 1959a: 45; 1959b: 13-16; Green 1963a: 65-66). Another component of this aspect is the material from level III at Skipper's Ridge (N 40/7) (Parker 1962: 223-224; Green 1963a: 60-61) and in layer 4A at the Opito site (N 40/3) (Green 1963a: 59-60). Another probable identification of a midden assemblage belonging to this aspect and phase has been made by Crosby (1963: 46) for site N 53-54/4 at Whiritoa.

Other sites at Opito with one or more occupation layers which may tentatively be assigned to this aspect are: N 40/5, N 40/8, N 40/6, N 40/16, N 40/2, and N 40/1, upper midden (Green 1963a: 58-64).

The Sarah's Gully aspect may be defined by a set of midden and settlement assemblages that form a component, and as such reveal the activities of a community within a locality. In this instance two localities from the adjoining bays of Sarah's Gully and Opito are the basis for its definition. They both furnish stratigraphic evidence for a number of changes and additions with respect to the materials from stratigraphically earlier layers.

In the dwelling area shallow rectangular pits, twice as long as they are wide, seem to replace the deeper pits with side buttresses. At the same time bin-type storage pits, many of them well drained or fitted with rims for covers, are found in a group to one side of the settlement.

An examination of the midden, particularly the faunal evidence, reveals other changes. The frequency with which *moa* bone for purposes other than manufacture appears, shows a marked decline, suggesting that alternative sources of food were now far more important, except for sites that are well inland. Also, mudflat species of shellfish now often comprise quite substantial portions of the midden, although the quantity of shellfish in the midden is still not great. Marine mammals do not seem to be as common as they were once earlier.

That one should suggest an Experimental stage in New Zealand agriculture at this point in the sequence should not really be surprising. Golson (1959a: 44-49) had already suggested

that the negative evidence was inconclusive, and that the storage pits at the Sarah's Gully settlement (N 40/9) were possibly *kumara* stores. Wellman (1962a: 60, 71-72) has also assembled evidence to suggest that the early people cultivated *kumara* and that it was introduced into New Zealand by some of the original settlers who rapidly increased in numbers, spreading out along the warmer parts of the North Island coast. It must be remembered that plants like the taro, *ti*, and gourd could have been introduced from Central Polynesia at any time in the last two thousand years, as the ancestors of first settlers in New Zealand were already practising agriculture there before they left. Moreover, the semi-cultivation of fern root could always be practised here in New Zealand, simply by firing the appropriate areas (Cumberland 1961: 145-146).

On the other hand, the sweet potato, having a South American origin, has a different history from the rest of the food plants in Polynesia. While it could have been introduced into Easter Island by the Early period of that prehistoric sequence, perhaps as long ago as 400 A.D. (Heyerdhal and Ferdon 1961: 522, 535) it is not at all certain that it would have reached the Leeward Island of the Society group by the 9th century, in time for it to be taken on to New Zealand. It is even less likely that the sweet potato, which was a relatively unimportant crop in the Society Islands anyway, would have been among the plants to have been selected in provisioning a canoe setting out from there. Thus it seems far more reasonable to assume that the introduction of the *kumara* into New Zealand may have a separate history, and that when it appeared and had been successfully adapted to New Zealand conditions, it provided what was, in effect, the basis for a cultural revolution.

On this interpretation it is equally difficult to conceive that systematic agriculture, which paved the way for concentrations of people in the phase that follows, had no earlier experimental stage as Yen (1961) suggests. Finally, I cannot see that this 14th century presence of agriculture does any violence to tradition, unless one is committed to a view that people of

New Zealand Eastern Polynesian culture were not ancestors of the Maori.

In the context, the thesis put forward by Golson that the development of separate clusters of well drained bin-type storage pits, as at Sarah's Gully, may indicate the presence of *kumara* storage, appears eminently sound. And, though not proven, it is a testable hypothesis which is in accord with the theoretical considerations put forward both by Yen and myself, and fits the scanty facts as we know them. The testing of it awaits the spade of the archaeologist willing to search for the evidence. That it will not be found in coastal middens abounding in artifacts, but in swamps and settlements behind them, seems almost too obvious to require comment.

It is doubtless true that there have been changes in some aspects of the technology at this stage, but at present we are not in a position to define them. In general, of course, the portable artifact assemblage is like that of the preceding period, although it seems somewhat impoverished, perhaps because at this point we are approaching the period of rapid change and replacement which characterizes the following phase. For instance, it seems that the 4A type of adze is very common but that some of the other Archaic types are rare. The use of *Dentalium nanum* sections as ornaments is common, as are the cut bird-bone tubes, but no whale-tooth ornaments or other similar items have been reported, and no grave goods were found with the two flexed, one extended, and one pit-type burial associated with the Sarah's Gully site.

Beyond this, the horizon of one of the more important phases in New Zealand prehistory is as yet unexplored. The changes that occur are involved in the fascinating question of what happens to a culture increasingly based on a type of tropical agriculture in a deteriorating climatic situation. Here, even Cumberland (1962b: 114, 126, 132), the most vigorous opponent of extensive climatic change, concurs that there was a rather damper and cooler oscillation of climate by the end of the 13th century which reduced evaporation, mean tem-

peratures and temperature ranges. Small though these changes may have been, they could have seriously affected the length of the growing season by increasing the number of ground frosts and frost days, which is the factor that would be of most significance for agriculture in New Zealand during this Experimental

phase. Also, the environment was now modified by man to such an extent that many of the natural resources were no longer readily available (Cumberland 1962a), so that alternative solutions were required for a stable subsistence basis among a population that was steadily increasing.

PRINCIPAL EXCAVATED SITES IN
THE AUCKLAND PROVINCE WITH
EVIDENCE FOR MAORI CULTURE

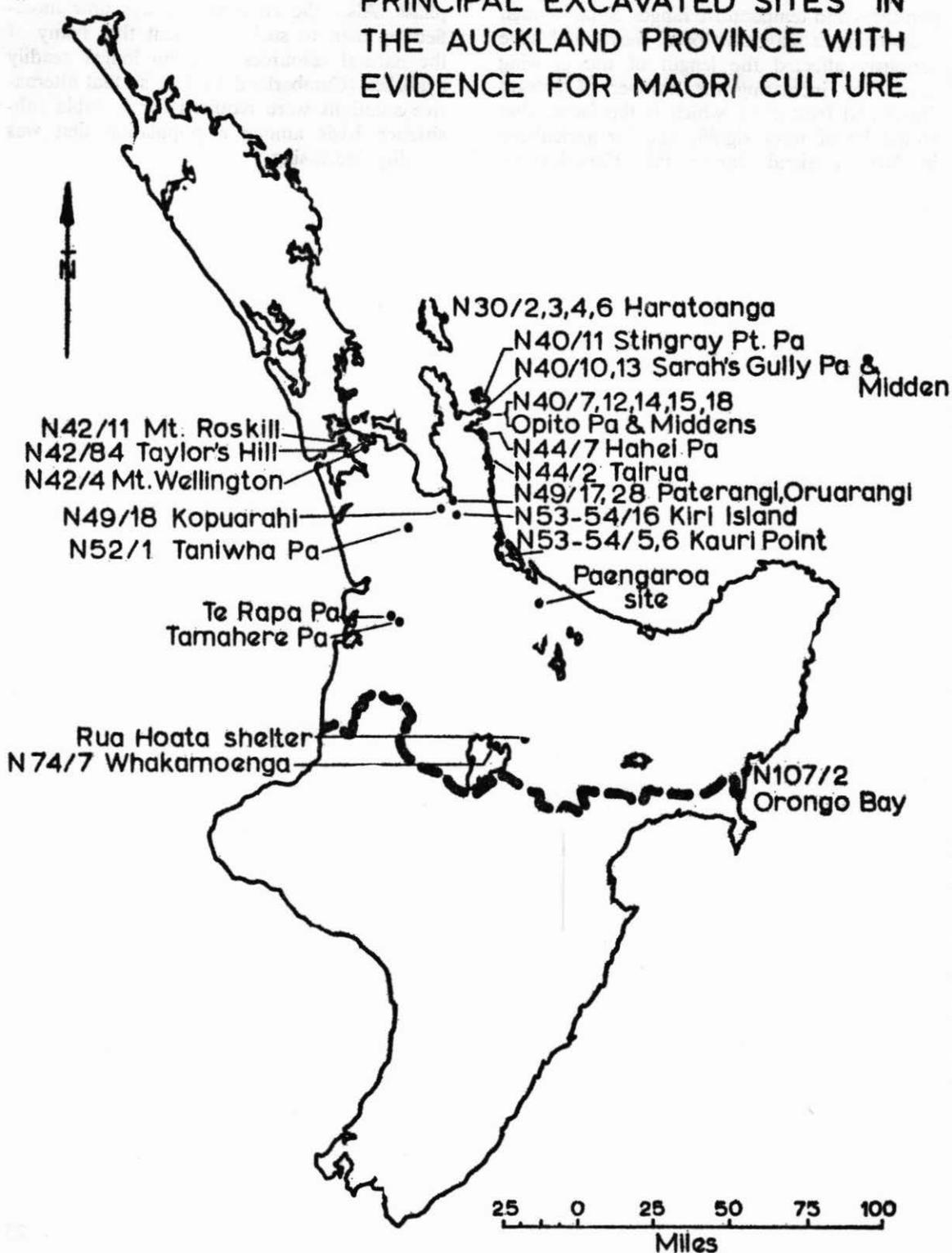


Fig.3

MAORI CULTURE: THE SEQUENCE FROM THE AUCKLAND PROVINCE*

INTRODUCTION

On the present evidence we have little indication in the Auckland Province of a distinct break between the end point of New Zealand Eastern Polynesian Culture and the beginning of what we here call Maori. For this reason I have here adopted the position that regional aspects of one developed into the other. On the other hand I recognize that beginning with this phase, we are tracing the first steps in the development of a broader stage in social and cultural evolution than a phase, a step which proceeds toward a new pattern of cultural integration within Polynesia itself. This broad stage, called Maori culture, I have divided into several phases and aspects.

Our difficulties in handling the materials for the Proto, Classic and Early European Maori phases in the Auckland Province do not end here, because the materials themselves fail as yet to present a totally coherent or integrated picture for all parts of the sequence. The explanation lies both in the fact that the data which is required for sound generalization is won only by excavations beyond the means of most individuals and the finances of most societies, and the fact that the events which make up this part of New Zealand's prehistory are far more complex and therefore more difficult to trace with the necessary accuracy.

For instance, three summers and one Easter period, £1,000 or more of cash, and many thousands of pounds of contributed labour were

necessary to penetrate the history of the Kauri Point *pa* (N 53-54/5). The far smaller Sarah's Gully *pa* required similar efforts. Our excavations on Mt Roskill were but an informative scratch on the immense area included within the former *pa*. The same statement can be made for Mt Wellington. Yet both absorbed large amounts of money, time and effort. Clearly, unless some rich benefactor provides the funds for the excavation of one of Auckland's volcanic cone *pa*, it will be a long time before their history or that of the Auckland Isthmus is really well known. One can only agree with the assessment made by Shawcross (1963a: 6) that "were it not for the enthusiasm and generosity of individuals and if this activity did not exist, New Zealand would fall into the ranks of so-called backward nations, which provide fields of research for their more advanced neighbours". It is the economics of New Zealand archaeology, and the need for resources beyond our means, that prevent us from learning more about this crucial and complex period in North Island prehistory.

For these reasons I find it more convenient to replace the sequential discussion with a regional approach, assigning different occupations on sites in each region to a phase or aspect where the evidence warrants. The fact that we turn to a regional approach at this point in the sequence is also doubtless a reflection of the fact that regional differentiation in New Zealand has become sufficiently pronounced for each to require separate treatment. While a large body of evidence on field monuments could be assembled to support this supposition, I have ignored it for lack of space, and concentrate solely on documented materials that are the result of recent excavations.

*Sites in the Auckland Province mentioned in this chapter are all marked on map in Figure 3.

THE SEQUENCE FROM THE AUCKLAND PROVINCE BY REGIONS

Coromandel Coast-Western Bay of Plenty

Although discussed here as a single unit, this region may eventually be separated to form two aspects. One will include Great Mercury, Great Barrier and other off-shore islands along with the eastern coast of the Coromandel Peninsula: the other will embrace the area from the northern head of the Tauranga Harbour south around the main part of the Bay of Plenty. In this survey we will proceed along the coast from north to south, stopping at *pa* sites or other settlements which have been sufficiently investigated to make comment profitable.

At Harataonga Bay on Great Barrier Island recent investigations on a simple ridge settlement (N 30/3) defended by a single transverse ditch, revealed interior features of a house pit. After the dwelling and defences were constructed, the site was abandoned and the pit later used for dumping refuse, or in two instances as a cooking area. The site probably belongs to an earlier period than the two large and complex *pa* (N 30/2, N 30/6) at either end of the bay (Spring-Rice 1962, 1963).

The house pit is instructive as typical of dwellings in this phase. It is cut some three feet into natural clay and has a system of encircling interior drainage near the walls and subsidiary drains in the centre of the floor, all of which lead to a sump in one corner and then through an underground tunnel to the outside. Two central post-holes and a subsidiary along one wall were the only ones found in the area uncovered, although the possibility of others exists (Spring-Rice 1963: 24-26). The transverse defensive ditch is flat-bottomed and not unlike the earlier style at the Kauri Point *pa*. A low inner bank was built from the spoil removed during the digging of the ditch. The site is probably of the Proto Maori phase.

On the beach below, a cooking area with a wind screen across the front was excavated, under which a thin lens of an older midden appeared. This site (N 30/4) is of a quite different character to the earlier beach midden (N 30/5) in that it lacks either portable arti-

facts or tools for their manufacture, and has more concentrated shell content. The species of shellfish present are more restricted in range and the content oriented toward the *Amphidesma* and *Chione* type of midden (Spring-Rice 1963: 26). Its exact cultural position is not yet clear, but either the Proto or Classic Maori phase is indicated.

A second off-shore island site (N 40/11) on Great Mercury Island provided pits with marked similarities to that at Harataonga, but the site itself has a more complex history including at least three building periods. Using a brief published report (Golson 1955) and the unpublished plans and photos, this sequence has been summarized (Green 1963a: 69). It indicates that pits of a similar shape, size and depth, and with a similar pattern of interior drainage, are to be found on this island. Although the pits exhibit a slight buttress at one end, not revealed in our more limited excavation at Harataonga, and possess a fantastic number of post-holes that make any statement about post-hole patterns unprofitable, they fit well with those of similar types at the Kauri Point *pa* (N 53-54/5) discussed below, as well as those from Taniwha *pa* (N 52/1). We do not know the true association of the two earlier building periods with the remaining features of this *pa* site, but the continued use of visible pit A, which occurs on a major terrace of the *pa*, is associated with possible palisade posts that were erected in the fill of pit B. This suggests that in the three periods of building we may be dealing with occupations that belong successively to the Proto and Classic Maori phases.

The next site of which I have knowledge is the *pa* (N 40/10) on the coast at Sarah's Gully. Again, three building periods are represented, of which only the last is definitely associated with evidence for the settlement's defence (Birks 1960: 18; Green 1963a: 66-67). Period I is particularly difficult to place. The large deep bell-shaped pits may be compared with better preserved, step-down, side entrance, underground store pits at N 53-54/6 (Green 1963b), or perhaps the small bell-shaped pit of Level IV at Skipper's Ridge (N 40/7) (Parker

1962: 223). The narrow 'coffin-like' pits of this period are not unlike a row of similar pits encountered at one end of larger deep pits at site N 40/11 on Great Mercury Island. The implications are that the period is later than the Experimental phase, but on such limited evidence it is impossible to place it definitely.

Period II, on the other hand, with its shallow rectangular pits, aligned for the most part along the east-west axis of the site, fits well the description of an organized but undefended settlement. There is considerable variation in the post-hole pattern of pits, but the tendency is for a row of three or more post-holes along the longitudinal axis and varying numbers along one or both sides. In layout, pit construction, post-hole pattern and size, periods I and II, if taken together, show their closest parallels to the undefended settlement at Kauri Point (N 53/54/6) (Green 1963b: 152). Pits of period II also recall in form and posthole pattern some of the shallow pits (E and J) encountered on Mt Roskill (Shawcross 1962a: 82). On the other hand they are not far removed in form from the larger-sized dwelling pits of the Sarah's Gully aspect, which is what one would expect if they belong to the following phase. Thus I have tentatively assigned this period to the Proto Maori phase.

In period III an extensive complex of post-holes is associated with ovens, many of them protected by wind screens. It is also associated with the construction of simple defensive earthworks, the use of above-ground structures marked only by post-holes, and ovens within the area of the settlement protected by wind screens, suggest a pale reflection of the Classic Maori Phase elsewhere on this coast, rather than a site of that phase. As such, it may represent a late marginal development of the Proto Maori phase in this locality.

To conclude the sequence at Sarah's Gully, the upper portion of a midden (N 40/13) on the ravine terrace between the *pa* and the sea, provides an assemblage belonging to the Early European Maori phase (Birks 1960: 20; Green 1963a: 67).

On Opito Bay two major *pa* sites are recorded, one a headland *pa* (N 40/15) at the

southern end of the bay, the other a ridge peak *pa* (N 40/14) surrounded by a stone wall on the Tahanga hill above the quarry site (N 40/8) (Shaw 1963: 35-36). Neither has been excavated. Stratified above the level III component belonging to the Sarah's Gully aspect at Skipper's Ridge (N 40/7) is a later component (level IV) of a different character. To this level Parker (1962: 223) assigns a single small bell-shaped pit (*rua*), a rather elongated 'bin' store pit, and a large number of deep oven pits and shallow circular scoops. A small pebble adze approaching a 2B in type is associated with this period, along with a midden resembling though not fully characteristic of those of later periods elsewhere on this coast (Green 1963a: 61). Stratigraphically and culturally this component may be provisionally assigned to the Proto Maori phase. From its contained artifacts, a shank and lower outer barbed one-piece bait hook and a 2B style adze, the upper portion of the beach midden (N 40/12) also belongs to either this or the following phase. Again, to conclude a long sequence of sites known from Opito, a midden (N 40/18) on the beach at the south end of the bay yields sufficient glass, clay pipe stems and bowls, and other artifacts of European origin, amongst the more usual pre-European materials, to place the site as one of the Early European Maori phase.

Moving further south along the Coromandel coast to Hahei beach, Mr C. J. Murdock has investigated middens there associated with a headland *pa* (N 44/7). The items recovered include eight one-piece hooks, some in human bone and all of a 'late' form. That is, some have shank barbs, most have outer barb notches on the point tip, and many have decorative notches along the outer edge of the shank and point legs. When present, the line attachments are of fancy style common to these hooks. Four of them have bait knobs. As such, these hooks are almost identical in style to those from period 5 at the Kauri Point *pa* (N 53-54/5). In addition, eleven Oruarangi style point legs, with a number of variations in specific features, have been recovered from this site, along with a single unusual point tip for a

large wooden hook, and two dog teeth and two bone point tips of the more usual sort. A bone needle, two plain pendants, one in bone and other in shell, may be added to this assemblage. Finally, there are six 2B adzes between 60-80 mm long, two 2B adzes between 110-120 mm in length, and an ungripped adze made on a flake, which complete the assemblage.

On this evidence, the large *pa* and its artifact assemblage probably belong to a regional aspect of the Classic Maori phase. However, we know little of the site's actual sequence of occupation, and a single 1A type adze in the collection draws attention to the fact that we may expect a longer history for occupation of that locality. While the parallels between this assemblage and those from the Hauraki Plains (Green and Green 1963: 31-33) are notable, a different emphasis, especially in frequency and styles among various types of fish-hooks is marked. Neither assemblage would be lost within the other, suggesting that the Hauraki Plains assemblages belong to one regional aspect, and those on this coast to another.

The last area on this coast to be intensively studied is Kauri Point Peninsula on the Tauranga Harbour. This is one of the few areas to have been thoroughly investigated and on which a sufficient portion of the evidence is published to serve as a guide for comparison and interpretation elsewhere. Chosen as a simple site of one phase, it is indicative of what may be expected from investigations on most *pa*, that is, the site has a complex history during which it has undergone extensive renovations in the course of several occupations.

Sites in the Kauri Point locality have been surveyed and recorded (Green 1963b: 145-147). They reveal that the cluster to which the Kauri Point *pa* (N 53-54/5) belongs is one of three on the peninsula, and the only one in which there are three *pa* defended by ditch and bank earthworks on those sides that lack natural protection. The excavations on the smallest *pa* have been extensive and revealing (Golson 1961a; Ambrose 1962). An undefended settlement (N 53-54/6) in this cluster has also been excavated and reported upon (Green 1963b). Both the middens from these sites and

those in the general area have been, or are being, intensively studied (Green 1963b: 147-150). Finally, investigations in the swamp beside the *pa* have provided evidence for still another component of a religious sort, in which our knowledge of wooden materials, especially combs, has been greatly increased (Shawcross 1962b, 1963b). The result is that for the first time we have begun to build up a picture of the full range of activities engaged in by a community within a single area.

A complete site report on the excavation of the undefended settlement (N 53-54/6) has been published recently (Green 1963b), so that its details need not detain us here. If the interpretation of the site as one occupied yearly in close proximity to the garden area is correct, it indicates that the population did not spend their full time living in one of the central and defended *pa*, but were dispersed throughout the locality. The presence within the settlement of two underground store pits for *kumara*, in addition to a number of shallower rectangular pits of small size, presumably for the storage of other items, indicates the agricultural basis of the settlement. This interpretation is supported by the analysis of a shell midden assumed to be associated with it. The general layout of the settlement, with most of its structures in alignment, its lack of visible artificial or natural defence, and the various shapes and types of pits encountered, have obvious parallels with periods I and II at the Sarah's Gully *pa* as noted above. In general, this settlement type seems a further development in the tradition of the Sarah's Gully aspect form of community. For these reasons, the site has been placed as one of the Proto Maori phase standing in a satellite relationship to the central *pa* as represented during periods 2-4 at Kauri Point.

The sequence at the Kauri Point *pa* (N 53-54/5) was initially divided into three periods by Golson (1961a: 19-27) and expanded to five, by the insertion of two additional periods within the sequence, by Ambrose (1962). Much of the detail that follows may be found in those accounts, but the interpretation of the site's position within the present conceptual frame-

work is my own and is, at times, at variance with that suggested by Golson (1961a: 39-41), or Parker (1962: 232). So little is known of the period I occupation, however, that any discussion of the three small rectangular pits in the hollow between the two dunes does not seem profitable.

Three aspects of the investigations are of concern here. First the evidence for change in the basic economy, particularly in regard to systematic agriculture and the extent and kind of food gathering and hunting one can infer from a study of the middens. The second is the nature and cultural position of the portable artifacts associated with the various periods of occupation. Finally, there are the marked changes in size, layout and defensive earthworks associated with the settlement itself, and the form and pattern of distribution of various buildings within the settlement.

A study of the middens in the local area shows that all are of a different composition and character from the middens associated with the various phases of New Zealand Eastern Polynesian culture. Dry land middens of a type composed almost exclusively of *Chione stutchburyi* and *Amphidesma australe* are common in the region of Kauri Point (Green 1963b: 149). A midden of rather similar composition is linked stratigraphically to period 2 at Kauri Point. A marked shift to a predominance of certain mudflat species of shellfish in those situations where the ecological conditions are favourable, was first demonstrated stratigraphically for this region on the site at Tairua (N 44/2) (Smart and Green 1962: 225-256). This change in midden character between sites of New Zealand Eastern Polynesian culture and those of Maori culture is really composed of three elements. One is the change in kinds (and at times size) of the shellfish being gathered, as noted above. A second is the deposition of entire shells in compact middens of a more homogeneous sort, rather than scattered through a sandy matrix, as is common on earlier sites. The third is a marked reduction in the midden of waste materials from the manufacture of artifacts, or even artifacts themselves, in various stages of preparation signifying that these

activities are now being carried out in a separate area of the site from that where the refuse is systematically dumped over extended periods of time. Thus, from the middens alone one may infer at this stage a real change not only in the role that the gathering of shellfish played in the economy of the community, but something about the nature of the change with respect to where various everyday activities were carried out. While the middens still produce a variable amount of fish bone, there is little other bone material, suggesting that hunting now plays a minor role in the community in comparison with earlier periods.

Direct evidence of systematic agriculture is lacking, but it may be inferred from several lines of evidence. First, the overall size and extensive fortifications would almost require one to postulate such a basis for the size of the population implied. More important are the substantial numbers of detached bin and some small bell-shaped storage pits found throughout periods 2-4 in most areas of the *pa*. In period 2 the larger rectangular type at times seem to stand in a patterned relationship to proper dwellings of a similar size (Golson 1961a: 23). Also, the layer laid down outside the later defences before period 2 may be plausibly interpreted as a garden soil (Schofield 1961: 32). The final proof of the role of agriculture may lie, of course, in the as yet unstudied pollen sequence from the swamp, where the vegetation history of the area is most likely to be recorded, and from discarded wooden implements such as *ko* (digging sticks).

Only a single artifact of any significance is associated with periods 2-4 on the *pa* site itself. This is a rounded stone lure shank with a flat broad groove towards one end on which to seat the base of the point leg, and an encircling groove at the other end for the line attachment. It may not be particularly diagnostic as lures lasted on the East Cape into the European period, but a stone lure shank is suggestive of a phase prior to Classic Maori. A more relevant assemblage of artifacts is found in the cultural component from the swamp. At present this component is tied stratigraphically to a period as early as or even earlier than the period 2

midden, indicating that the artifacts were "in use at the beginning of the time during which the Kauri Point *pa* site was occupied" (Shawcross 1963b: 55). Besides thousands of flakes of obsidian from several sources, one can list for this assemblage a 2B adze, three hollow wooden vessels, *ko*, wooden flutes, gourds, barbed spears, baskets, an adze shaft, pieces of worked kauri gum, and a large wooden figure. Finally, of course, there were at least 330 large identifiable fragments of combs, many of which bear a design of some sort (Shawcross 1962b: 54; 1963b: 52-55). As a whole, the assemblage clearly implies that we have entered into a phase which one may identify with an early stage of Maori culture, and one which was based on systematic agriculture. For these reasons I have assigned periods 2-4 at the Kauri Point *pa* to the Proto Maori phase.

The house and storage pits of period 2 fit well into this assignment in that they have their closest parallels with the pits from Great Barrier and Great Mercury Islands already discussed above, and with some of the early pits from the volcanic cone site of Mt Roskill in Auckland. The parallels have to do with buttresses on the short or end walls of some pits, with floor drains in others, and with recessed post-holes and floor slots in still other pits. Other similarities are more general but have to do with overall size and depth, the association of big and little pits in sets, and the frequent use of two main lines of central post-holes in the larger dwellings. These pit structures are therefore in many respects quite different from those of earlier phases, although obviously related to them.

The evidence for patterning of dwellings and storage pits in the association of identical structures, one with and one without a hearth, has been developed by Golson (1961a: 23). The interesting point is that further excavations at the base of the terraces have revealed for period 2 a much larger house than any of the others, with slotted, somewhat flattened post-holes recessed into the walls. From its size and type one would interpret this as a principal residence, if not an assembly house for the whole community. As such, this patterning is

the first real sign of social differentiation and stratification in those settlements we have examined.

During period 5 the occupation exhibits a number of features which one associates with the Classic phase. The defensive system is a double ditch and bank, the bank of which is created by piling up a completely artificial fill to form the earthwork. Apparently by this time most of the structures were above the ground or on the surface, and for the most part reveal themselves only as a maze of postholes. They are contemporary with at least one bell-shaped *rua* inside the *pa*, and cooking ovens and burials both inside and outside the defences. A reasonable number of Classic artifacts have been recovered from period 5 contexts, including two late style one-piece bait hooks without barbs, and one with a shank barb, all identical in style to those recovered from the *pa* (N 44/7) at Hahei, mentioned above. Three other one-piece fish-hooks in shell, a toggle, one large and two small adzes of the 2B type, and several sinkers, complete an acceptable assemblage of the Classic Maori phase.

Whakatane-Rotorua

Although no full-scale excavations have been carried out in this region, several small scale ones have produced some informative data. Both Pullar (1961) and Wellman (1962b: 50-53) have examined coastal sections in the region and Pullar has assembled some evidence of occupation before the Kaharoa ash-shower. Mabon and Pullar (1961) have also used evidence of the Kaharoa ash-shower in position on the terrace and scarp portion of Kapu Te Rangi (Toi's *pa*) outside the visible ring ditch defences to suggest early settlement. While potentially extremely important, at the moment this evidence is difficult to assess until the Kaharoa ash-shower is more securely and precisely dated.

Elsewhere in this region, an excavation at a large and complex *pa* near Paengaroa by members of the New Zealand Archaeological Association revealed at least two periods of occupation after the deposition of the Kaharoa ash-shower. The earlier occupation consisted of a

shallow pit, about 20 ft. in length, with several post-holes near the walls at either end (Golson 1960b: 14). Its size and depth recalls the large pit, I, at the Kauri Point unfortified settlement (N 53-54/6) (Green 1963b: 151). The visible pits of the later period, associated with the standing defensive earthworks and probably also with some of the collapsed underground storage pits on the site, provided, from the two examples excavated, information on a type of pit different from any encountered in previous discussion. These pits have a depth of 5 ft., with interior dimensions of 18 by 12 ft., and at times a slight bench-like extension at either end which gives the pit an overall length of more than 21 ft. On the floor there are usually three rows of post-holes, with four or five posts to a row. One of the large pits on this site is definitely associated and aligned with a smaller one $15\frac{1}{2} \times 6\frac{1}{2}$ ft. in area with a single row of post-holes down the centre (Golson 1960b: 14). In size and shape, in the pattern of post-holes in the large and small pits, and in the relationship between pits of these two general sizes, they are remarkably like the middle period pits, A, B, and C on Mt Roskill (Shawcross 1962: 82). Large pits of this type are probably found on Mt Wellington also and as far south as Pari Whakatau *pa* in Marlborough (Duff 1961: 297, 299). It is likely that where large *pa* exhibit complex internal subdivisions and pits of these two types, we have, in regions like Auckland and Rotorua, reached the beginnings of the Classic Maori phase.

East Cape-Gisborne

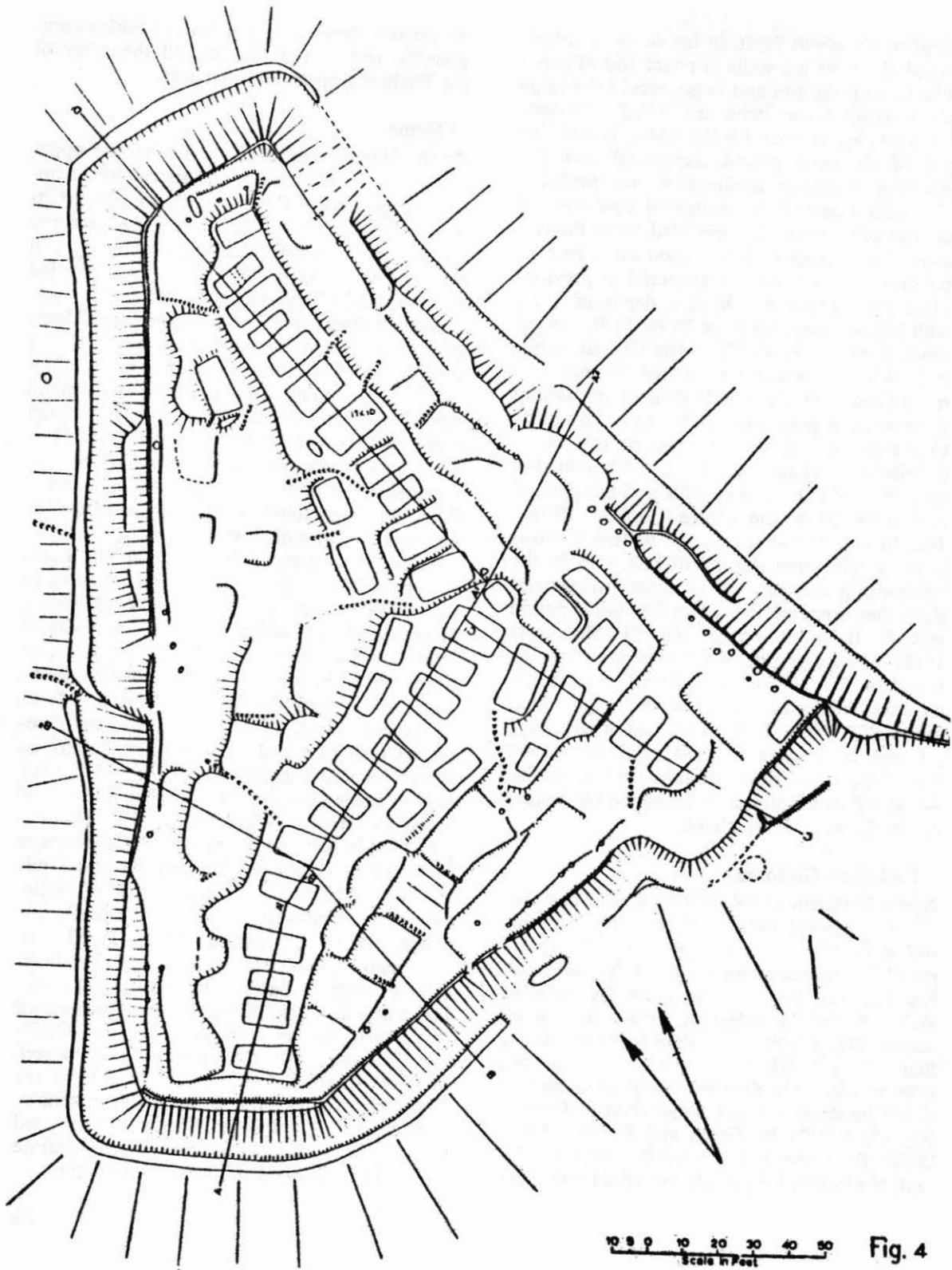
Again, Wellman (1960, 1962b: 42-50) has provided a general outline of the events in this region in relation to stratigraphic sections exposed in beaches along the coast, but his work has not yet been followed up by detailed archaeological investigation, except in one instance. While Wellman's data leave no doubt that all materials for a long sequence are present, the only detailed study of a section which he describes was undertaken at Orongo Bay (N 107/2) by Green and Pullar (1960). While their stratigraphic results were significant, the cultural materials recovered only per-

mitted the identification of several fishing components, one of the Classic and the other of the Early European Maori phase.

Taupo

At the Whakamoenga Cave, Taupo, the upper deposits exhibit evidence for successive camping occupations of the Proto Maori phase. Unlike early camp sites, later camping sites are not generally as informative artifactually, and this is true in the present case. Also recorded near the end of the sequence is a burial component, perhaps of the Early European Maori phase, and a camping component which almost certainly belongs here (Hosking 1962: 25-29). A similar camping component of this general period has been described for the Rua Hoata shelter on the Waikato River by Phillips (1947). Here fire sticks, sleeping mats, baskets, net fragments, stone flakes, shell scrapers and a flute have been found in association with various rock carvings of canoes.

Some 65 settlements belonging to the Early European Maori phase have been identified in the region around Lake Taupo by Ward (1956). Here though the white potato was introduced later than elsewhere, but still long before Europeans settled in the area, its introduction seems to have changed the basic pattern of Maori settlement. Here, also the white potato replaced fern root and not the sweet potato, as the staple crop, because *kumara* did not do well in the region due to the cold winters and unseasonal frosts (Ward 1956: 42). This suggests that in this area we may expect differences in the development of Maori culture, the kinds of storage pits used, and the type of settlements occupied—all of which will mark this region off as a separate aspect. Ward also comments on the effect than an inland ecological environment has on the general economy. He notes the lack of eels, the abundance of fresh-water fish of various kinds, the significance of the fresh-water crayfish and mussel, the heavy exploitation of wild fowl from the lakes, rivers and swamps, and the extensive hunting of bush birds, particularly the ground parrot. Again, the expectations for a separate regional aspect of Maori culture are great.



10 20 30 40 50
Scale in Feet

Fig. 4

Lower Waikato-Hamilton

This important area, which should be a centre for sites of the Classic and Early European Maori phases not only on historical and traditional evidence, but also from the concentration of *pa* sites and numerous 2B types of adze found in the region, is almost unknown archaeologically. Limited excavations on Te Rapa *pa* revealed numerous bell-shaped *rua*, along with evidence for palisading and gateways (Hunt 1962a). On Tamahere *pa* depressions revealed two *hangi* and four 'hut' sites, the floors of which were once covered in fern bedding. The 'hut' sites, however, have not been described in detail sufficient for comparison (Hunt 1961). Also, a fishing camp at Raglan, probably of the Classic Maori phase, has been reported (Hunt 1962b). Finally, recent excavations at a *pa* near Taniwha by Lake Waikare have provided a map of a complete *pa* with some forty-four rectangular pits, of which seven were excavated (Fig. 4). The *pa* (N 52/1) is defended by an encircling ditch with inner bank and palisade, and outer bank. The pits are of two types, the smaller usually with buttresses on the short end walls and a centre line of post-holes, the larger without buttresses and with a double line of four post-holes. Both types have encircling floor drains which lead out through underground tunnels to open main drains, which in turn lead the water off the *pa*. Ovens on the flanking terraces, some of them protected by a pattern of post holes suggesting wind screens, are also common. While the pits and their interior features are most similar to those in sites of the Proto Maori phase on the Coromandel-Western Bay of Plenty coast, the site itself may date to a later phase, perhaps the Early European Maori. At present we have no other way of assessing its age, however.

Hauraki Plains

If one examines Golson's (1959a: 68-69) analysis of the distribution of Archaic and Classic adzes in the Auckland Province, one is struck by the preponderance of the Classic form on the Hauraki Plains. Those archaic forms that appear, all occur on higher ground toward the Coromandel side of the Plains along the Wai-

hou River, but are seldom encountered on the Plains themselves (personal communication, C. J. Murdock). Adzes found out on the Plains belonging to categories other than 2B, number ten to my knowledge. Not only are they different in form, but also frequently rendered in baked argillite rather than greywacke or andesite. Some are indisputable Archaic types. Interestingly enough, in every case but one, these adzes have not been recovered by excavation on the four sites under consideration here, but have been ploughed up near the sites. Presumably, long before the artificial *pa* settlements were created, these points of higher ground served as stopping places.

Archaic traits other than adzes reveal a similar distribution. Thus stone drill points, in chert and related materials, and *moa* bone fish-hooks in one piece, are lacking on the Plains, while the use of human and *kuri* (dog) bone for artifacts rather than *moa* bone, contributes to the impression that the assemblages belong to a late period of Maori culture. From an ecological point of view this makes sense, since this swampy land required the development of special techniques for agriculture (drainage canals), storage (raised store houses), and settlement (artificial reclaimed islands). For these reasons, it would seem valid to suppose that the area of the swampy plains was explored and probably exploited, but was not intensively settled until late in the sequence when population pressure and the evolution of suitable techniques would have favoured this development.

These sites are therefore thought to belong to the Classic Maori phase. Even so, certain of the portable artifact types, as well as the form of the settlements, are sufficiently distinctive to warrant assignment to a separate regional aspect, different from that along the Bay of Plenty-Coromandel Coast, or in the Auckland Isthmus. This aspect I have chosen to call Hauraki Plains. The Flatland *Pa*, variety A, with natural obstacles on most sides and palisading as the sole means of defence, is the type settlement for the area (Golson 1957b: 94). A great portion of the area enclosed is apparently created by artificial infilling with

stone and shell over the mud base (Teviotdale and Skinner 1947: 341-343). The artifact assemblage associated with the Oruarangi site (N 49/28) was first described by Fisher (1934, 1935, 1936, 1937) and his account amplified by Teviotdale and Skinner (1947). Comparison with collections from three other sites in the area: Kopuarahi (N 49/18), Kiri Island (N 53-54/16) and Paterangi (N 49/17) (Green and Green 1963) to verify the adequacy of the Oruarangi sample not only expands our knowledge of the artifact range to be expected from excavation, but also confirms the reliability of the Oruarangi assemblage as a typical sample. One only wishes for better stratigraphic control over the material, because it stands as one of the best documented regional collections ever assembled for North Island aspects of the Classic and Early European Maori phases.

As would be expected, this assemblage differs from those of other regions in the numerical emphasis given to various types, not in a totally different range of types. This variation is best illustrated by the fishing gear.

On the Hauraki Plains the simple bait-hook with intricate barbing, bait attachment, and 'fancy' forms of line attachment, is so seldom represented as to make the few one-piece specimens encountered explicable by trade. Two-piece examples of this form, where both shanks and points are in the same material and the bases are both faceted to facilitate a smooth juncture, are not abundant. On the other hand, the category of large wooden hooks is well represented, either by actual specimens where conditions for preservation are favourable, or by bone points for them where conditions are not. The large, one-piece wooden hooks with intumed point from Oruarangi recalls the shark hook of the same form from Central Polynesia; while the two-piece version with the shank leg and complete base in wood, and the rest of the point or point leg in bone, tooth, or shell, recalls two-piece large wooden hooks from Hawaii.

Characteristic of these four sites are the bone, tooth and shell points of this hook, called by Fisher dog jaw, dog tooth, imitation dog tooth, and 'Oruarangi' points.

Though found nowhere in such great numbers as on the Hauraki Plains the 'Oruarangi' point does occur elsewhere in the North Island, e.g. on the Coromandel-Bay of Plenty Coast at Opito, Hahei and Tauranga, and at Amodeo Bay on the Hauraki Gulf coast of the Coromandel peninsula, and the Manakau South Head (Fisher 1935: 295 and surface collections). The specific forms of the point from other North Island sites may exhibit stylistic differences, but as yet they have not been studied.

Finally, various Classic forms of lure for the barracouta and *kahawai* are missing from these assemblages, while the two bone lure shanks recovered are related to a specialised East Cape variety of minnow lure made as late as the European period (Golson 1959a: 49, 57).

The 2B adzes, which exhibit considerable uniformity, Fisher (1936: 15-18) places under varieties A and B. The first form, common in the Thames Valley and Waikato area, is the most common on the Hauraki Plains; the second is a variety typical of districts north of Auckland, and is less well represented in the Plains, except at Kiri Island.

The decorative bone combs from Oruarangi also appear to differ from those of other regions.

Teviotdale (Teviotdale and Skinner 1947: 340, 346) ascribes to Oruarangi *pa* a traditional history which dates back some four hundred years, the site being abandoned circa 1820 A.D. European contact is indicated by the drilled pig-tusk pendant, European pottery, and musket balls, recovered on the site. Thus, he would give it an occupational history of 300 years (1520-1820 A.D.). It was first settled by Ngati-Huarere and taken from them by the Ngati-Maru circa 1650 A.D. (Kelly 1949: 175-178). In the 19th century the Ngati-Maru successfully defended this area against the Nga-Puhi (Teviotdale and Skinner 1947: 340).

On the archaeological evidence settlement at Kiri Island also lasted well into the 19th century. From this site a coin and trade token both date to 1854, and a shilling to 1816. Other European items include a bored pig's tusk, two others not perforated, willow ware china, a pointed steel Maori adze, nine gun-

flints, and nine fragments of clay pipe. This indicates that if the stratigraphic evidence were sufficient, we would be able to distinguish components for at least two phases on this site.

After assessing all of the data available, it seems reasonable to suppose that all four sites were occupied during the Classic Phase, and that two of them continued to be occupied during the Early European Maori phase. On present evidence then, the cultural sequence for the Hauraki Plains begins relatively late. Earlier evidence is scanty and most settlements that have been identified belong to a regional aspect that is distinct from those in Auckland or the Coromandel-Bay of Plenty Coast at this time. As such, they deserve recognition as separate aspects: The Hauraki Plains, and the Kiri Island (see Table I).

Greater Auckland Region

Many of the sites on the Tamaki Isthmus and in other localities adjacent to Auckland are now recorded and a number have also

been fairly fully mapped and described (Brown 1960, 1962; Davidson 1963; Diamond 1955, 1961; Groube 1960; Groube and Green 1959; Maddock and Taylor 1962; and Taylor 1961, 1962, 1963). While for the most part, these surveys merely inform us that more than 400 sites are located in this region, it is one in which almost every type of site known within New Zealand is found. Both the general impression from the types of sites described and the very much more limited data on portable artifacts associated with them, indicate that the overwhelming majority date to some phase of Maori culture and, where they have not been obliterated, provide a substantial documentation for a long and intensive period of occupation in the region of Auckland. The recovery on some of the *pa* of Archaic forms of adzes, along with some that stand typologically as transitional between them and the expected 2B form, suggests that occupation on some of these large volcanic hill *pa* goes back for a considerable period of time (Golson 1961b: 61). A radio-

TABLE I
THE CULTURAL SEQUENCE ON THE HAURAKI PLAINS

Phase	Aspect	Sites	Tribe
1860 A.D.			
1800 A.D.	Early European Maori	Kiri Island Oruarangi	Ngati-Marū
1650 A.D.	Classic Maori	Hauraki Plains Oruarangi Kiri Island Kopuarahi Paterangi	Ngati-Marū
? 1520	Proto Maori	Traditional evidence of earlier settlement by other tribes	Ngati-Huarere
	(Exploration and Exploitation)		

Mt. ROSKILL

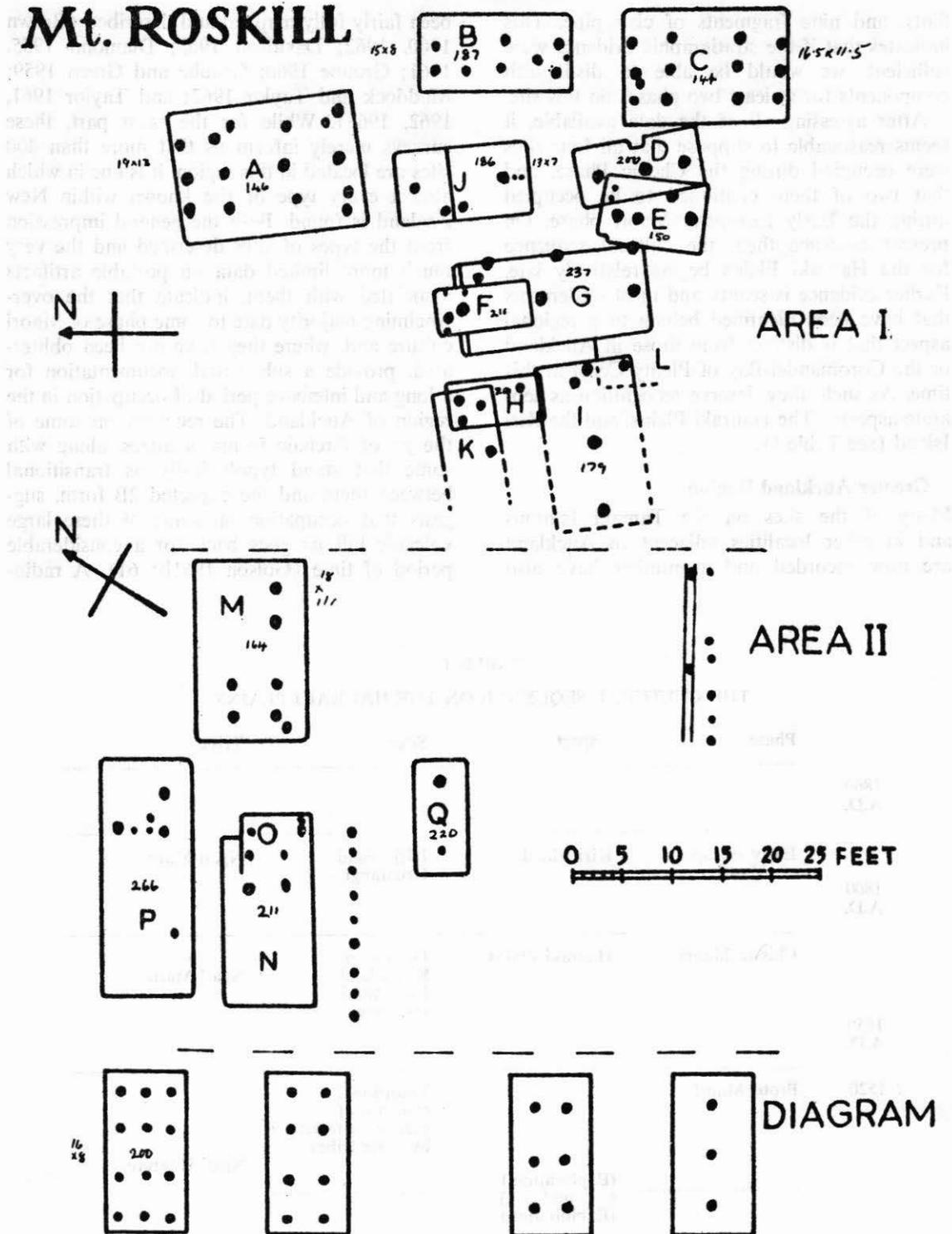


Fig. 5

(From Shawcross 1962 a)

carbon date of 520 ± 40 years ago for Mt Wellington lends support to this (Golson 1961c: 51).

When it is realised that only three limited excavations on volcanic hill *pa* have been undertaken, it becomes evident that excavation has only scratched the surface of Maori pre-history in this region. The first excavations at Taylor's Hill *pa* (N 42/89) can be said to have exposed a few badly defined pits, some deeply buried midden, a few burials and some artifacts, but no preliminary report has ever appeared which assesses the results. The second excavations at Mt Wellington (N 42/4) provided a complicated sequence for a minute portion of its total area. Although the position of several types of pits can be tied in with this sequence, the internal features of the pits were not always evident owing to the nature of the scoria into which they had been cut. The most recent excavation on Mt Roskill (N 42/11) provided a shorter and less complicated sequence for one of the two areas investigated, but this was compensated for by a respectable amount of information on the pits themselves and a sequence into which different types seem to fall.

The short account given by Golson (1960c) of the Mt Wellington excavations was made before the investigations were completed, so that it is difficult to reconstruct the entire sequence in the absence of final maps and diagrams. The following is a summary from his preliminary assessment of the sequence.

Above the oldest or natural ground surface near the top of the crater slope is a layer of shell and scoria dated to 1430 ± 40 A.D. It is followed by a build-up through natural deposition of bonded scoria in the area of the upper flat. This scoria, however, has not been eroded from undisturbed material but is derived from human activity in the area above this flat. The living flat itself is subsequently more sharply defined by cutting an outer scarp through this bonded scoria, and in places by constructing a wall of scoria boulders along the slope edge. Into the surface of this flat, four pits, two large and two small, are cut. All four exhibit signs of having been burnt and thereafter filled with

unstable shell and scoria refuse. What may be a slightly more recent pit, is also cut from this same surface to a depth of eight feet, and may have necessitated the recutting of one of those larger pits already on the flat. The deep pit is filled with a deposit of even-bedded, compact layers different from the deposits in the other pits.

At this point, the lower flat is either created or considerably expanded by cutting away a part of the upper flat to a depth of five feet, including a portion of one wall and part of the fill of the deep pit. On this lower flat some new pits seem to have been constructed which are still visible on the surface. On the upper flat and an upper terrace, oven and firepits occur with some regularity, and a midden with fragmentary shell begins to accumulate. In these last two areas, this midden is in turn sealed in by a layer of fresh and relatively sterile scoria. On top of this scoria, further occupation is encountered only at one point on the upper flat where a few ovens and middens are in evidence. The site seems not to have been inhabited during the Early European Maori phase (Holloway 1962: 54, 60), although this may be disputed by a closer assessment of the historical evidence.

Until further details are available, the one period of real interest is that of large and small pits on the upper flat at a point about mid-way in the sequence, or about the 17th century as a rough estimate. These pits in size, depth, and intact internal features seem to parallel those of the late occupation at a site near Paengaroa in the Rotorua region already discussed, and those of the middle period at Mt Roskill discussed below. Again with the construction of this type of pit on what were by then large complex hill *pa*, it seems entirely reasonable to assume that we have reached occupations of the Classic Maori phase in terms of our present definition.

The published sequence of pits for Mt Roskill (Fig. 5) contains one error (Shawcross 1962a: 83). Both pits I and G are stratigraphically earlier than L, and pit E is clearly later than both D and G. For several reasons, pits K, I and G may belong to one period, while D may be either of the same age or earlier.

The two large pits A and C, visible on the surface, and pit B which is to be associated with them, form a second set which on the available evidence seems to be later than any of the set assigned to the first period. Whether L or E belong to this second period or a later one is not entirely clear. H and F seem to be the last pits constructed in this area of the site.

On the interpretation advanced here, pits K, I and G all have specific parallels in size, shape, and interior features with pits assigned to the Proto Maori phase on the Coromandel-Western Bay of Plenty coast. Pit D, which may be earlier on this site, also bears certain parallels, especially in regard to a buttress step along one side, to pits of earlier phases in that region. For this reason, and because they are stratigraphically earlier than pits of the type assigned to the Classic Maori phase, I have placed this first period at Mt Roskill in the Proto Maori phase. The second period set of pits, A, B, and C, and probably L and J, are very similar in their dimensions, in the pattern of post-holes in both the large and small-sized pits, and in the relationship between the two

sizes, to pits on Mt Wellington and elsewhere. These large visible pits are also likely to be contemporary with many of the other visible features on this large, complex volcanic cone hill *pa*. For these reasons I have, as elsewhere, placed this occupation in the Classic Maori phase. A number of post-holes which form no obvious pattern, pits F and H, and the midden refuse accumulating in pits A, B and C, then become part of a final but short occupation that belongs to the same phase. Deposits of this last period of occupation also yielded fragments of several adzes of type 2B. Again, there is no evidence of occupation during the Early European Maori phase.

To complete a review of archaeological evidence for the Greater Auckland region requires the citation of sites from the period of European contact. While a number of such sites are known, many of them historically, only a single archaeological report on a site of this period has appeared. This is the stratified midden (N 43/1) on Ponui Island, the upper level of which contains artifacts of the European Maori phase (Nicholls 1963: 19).

SUMMARY, DISCUSSION AND CONCLUSIONS

SUMMARY

A review of various theoretical concepts stemming from archaeological rather than traditional sources, reveals a number of conflicting interpretations of New Zealand prehistory. Nearly all of these formulations have been based on excavations in areas south of that under review here. For ecological reasons, however, the same sequence of events is not to be expected in every region of New Zealand, while, for the same reasons, in the northern North Island province of 'Iwitini' the longest and most complicated sequence of events may be anticipated. This has necessitated a fresh approach to the problem and the construction of a longer and more complicated series of phases and aspects in order to handle the mass of material recovered in the last few years in the Auckland Province.

The excavated archaeological data relevant to the sequence of events that constitute the prehistory of the Auckland Province have been studied with the guidance of the conceptual framework defined in Chapter II of this review. In this way, a sense of order has been imposed on what has been up to now a rather unorganized body of information, especially when viewed beyond the perspective of the site itself or the few outstanding portable artifacts which it contained. Thus, previous reference to a wider perspective, at least from the point of view of excavation rather than that of museum collections and of historical and traditional sources, tended to polarize discussion around two points in the sequence—one an overexpended Archaic or Moa-hunter phase, and the other a rather poorly defined Classic phase.

However, by using a range of information available for the less spectacular items in each assemblage of portable artifacts, details on non-portable artifacts like pit structures, and various

economic and ecological inferences that can be drawn from a set of sites within a locality, it has proved possible to recognize at least six distinct phases, some of which are well enough known regionally to qualify as aspects belonging to a particular period. These divisions, as outlined below, are based, not solely on replacement or qualitative change in the technology, or on the presence or absence of a single trait or an element of an extinct avifauna, but on a wide range of criteria in which socio-economic and ecological considerations are given prominence. The result in the recognition of three phases of New Zealand Eastern Polynesian culture—Settlement, Developmental and Experimental—and three phases of Maori Culture—Proto, Classic and Early European Maori. These serve to document the cultural developments through which peoples from Eastern Polynesia passed from their first settlement in New Zealand until regular contact with the Europeans came to dominate their culture entirely.

The questions left unanswered are how these changes came about, the nature of developments in many of the regions of New Zealand that are still unknown archaeologically, and the actual course of events from region to region. While many of the questions which the imagination poses are capable of being answered by controlled excavation in numbers of new sites, this same source of information is capable of being obliterated by a country which continues to neglect this part of her historical heritage, and this in the region under review is a very real danger.

THEORETICAL DISCUSSION

In this synthesis some procedures at variance with those in current archaeological practice have been adopted. Primarily they concern the

way in which certain archaeological units have been employed and the manner in which their formal or content boundaries have been defined. Nevertheless they bear a close relationship to those archaeological units which have been the subject of extended comment for the last decade by a number of authors (Willey and Phillips 1958, Rouse 1955, MacWhite 1956, and Olson 1962). For this reason a brief discussion here might serve to clarify several of the points at issue and the solutions adopted for this particular case.

The primary difference lies in the use of *aspect* for the conceptual unit most American archaeologists would call a *phase*, and the employment of *phase* in a different sense from its general usage by many but not all archaeologists. This innovation stems from discussions between two archaeologists, one with English and the other with American training, attempting to find a common ground on which to base formulations of New Zealand prehistory (Golson 1959a: footnote 1). As a result the *phase* in the primary sense in which it is employed by Willey and Phillips (1958: 14) was replaced in New Zealand prehistory by *aspect* and the term *phase* used in another context in which its historical and stagal connotation could be exploited as a significant ordering of culturally similar *aspects* at a lower level than that of the maximal unit, *culture* (Golson 1959a: 31-33). In an article which derives from an earlier version of this review, this innovation by Golson and his definitions of component, aspect, and phase were given further refinement by myself as follows:

"Within any region of New Zealand at a given period of time one finds various types of sites which represent all the activities carried out by a community: i.e. a set of beach midden components, a set of dwelling components, a set of burial components, a set of quarry components, etc. Together, these make up the regional aspect and may be designated by a local name to distinguish them from other aspects. An aspect then is an assemblage of types composed from a number of site components and defined in such a way that the events represented by the total assemblage cluster sufficiently closely in time to permit

the inference that no marked change took place between the first and last events implied (Spaulding 1960: 448). In regional sequences aspects occur during given periods of time, and in this respect differ from phases and cultures which do not appear everywhere at precisely the same period of time. Aspects define *regional periods*, but phases and cultures define *inter-regional* stages of cultural development and as Childe (1935: 6-7) and many others have insisted, the two must not be confused." (Green and Shawcross 1962: 215).

These refinements were the result in the first instance of my attempt to employ the terms aspect and phase as defined by Golson to the data of the Auckland Province, only to find that aspects multiplied faster than the two phases which he had distinguished, so that additional integrative phases were required. It also derives from the need to solve the problem of formal or content definition for a phase or aspect in a manner that was both unambiguous and capable of further subdivision should this prove necessary.

The second problem of definition has plagued many American Southwestern archaeologists who have used the concept of phase, as a recent review of its usage by Olson (1962) shows. In the Southwest the dominance of certain pottery types has long been the initial foundation on which both the temporal and geographical ranges of a phase (aspect) have rested, the presence of one or more types being sufficient to define the phase (Olson 1962: 468). Other items of culture such as architectural types have sometimes been tried, but neither singly nor in combination, have they yielded results that can be employed with the same level of confidence as pottery (Olson 1962: 469). As noted above similar difficulties also exist in New Zealand because definitive studies of the best known items of culture such as adzes, fishhooks, or ornaments are not available for finer aspect and phase divisions which are apparent if one surveys the totality of the material. Pottery, of course, was totally lacking.

In the absence of pottery then, the basic difficulty in New Zealand is that many of those functional types on which any definition of a phase or aspect must rest are likely to persist

into the following phase when other significant changes are occurring. This contrasts with the case where there is pottery especially when the types are numerous and when those types are based on minor stylistic or technical changes, which are alternative solutions to the same functional problem. Such types appear not only to be very sensitive indicators of cultural change but as well are easily obtained in large quantities that are capable of being seriated. As Olson remarks "Individual artifacts can seldom be assigned to specific phases, something that can be done with single sherds" (1962: 467). From another point of view it therefore seems probable as Rowe (1959: 318-320) has cogently argued that these finer chronological divisions will ultimately have to rest on an analysis of the features or attributes presented by different artifact types through time rather than on the types themselves. This is certainly the case in the study of fishhooks from Eastern Polynesia (Green 1961: 142-143).

Because the lack of definitive artifact studies in New Zealand prevented definition of either aspect or phases in this way, I have adopted a solution suggested by Spaulding (1960: 449) for the unambiguous definition of a period which is also a type of definition that is capable of later subdivision. This solution avoids that 'index fossil' type of thinking which still pervades much archaeology, where both the definition of the unit and the assignment of an assemblage to a unit rest on the presence of a trait or set of traits that commonly occur together from their initial appearance in the region to their *final disappearance*. Instead my definitions are based on the first appearance of a trait or group of traits to the first appearance of a new trait or group of traits which serve to identify the next phase or aspect. This procedure I have illustrated as follows:

" . . . in the present scheme the first phase is defined by the following cluster of traits, A-D, or from the first appearance of A to the first appearance of E, and after the appearance of E and an associated cluster of traits, to the first appearance of H and its associated traits. To illustrate, when man first arrived in New Zealand he began his initial adaptation of

Eastern Polynesian forms of technology to local environmental conditions—(A), he obtained obsidian from the Mayor Island source but otherwise employed local materials (B), he lived in camp-type settlements (C), and wherever possible hunted a full range of *moa* and otherwise exploited an environment previously untouched by man (D). With the first appearance of one type of pit dwelling associated with semi-permanent settlement (E), we enter a new phase in which trade in other sources of obsidian and materials like argillite appears (F), and probably in certain areas an introductory stage of agriculture and storage (G) begins. A change in the type of dwellings (H), and of storage pits (I) and perhaps the introduction of *kumara* (J), mark the next phase. Note that while each aspect or phase is defined by the first appearance of *qualitatively* new types of evidence, some of the initial criteria may persist or are modified only by *quantitative* changes." (Green and Shawcross 1962: 216).

Several points arise from these considerations. As Olson (1962) makes clear in his review of the phase concept in the Southwest, it has been used both as a discrete unit of time in the cultural sequence of a region and as a stage in the cultural development of an area or sub-area. The same comment also applies to the use of the Pecos system of classification in which the basic concept a period, has been used both as a specific span of time and as a stage in the development of Puebloan or Anasazi culture. In the present framework this difficulty is avoided by using both aspect and phase. The aspect is thought of as the basic operational unit within a region representing contemporaneous and culturally identical communities which exhibit no marked change over a particular period in time. The phase, on the other hand, is the product of the first of Rouse's (1955) types of phase (aspect) correlation, in which aspects defined primarily on their formal content, are placed together largely on the basis of their similarity and relative position in the inter-regional sequence without consideration of their precise temporal or geographical definitions. However, the very fact of their general similarity in content and their occupation of the same rela-

tive position within the developmental framework implies a connection on the historical or 'genetic' level of correlation as well.

This means that within an area occupied for a considerable period of time by a single culture, it is possible to have aspects appear in certain regions which will diverge sufficiently from the majority, either for ecological reasons or because the people in one region participated in cultural contact or innovations which the others did not, and thus constitute additional but separate phases within the history of that culture. For example, in New Zealand the Experimental phase may appear only in the Northern part of the North Island, while elsewhere something approximating to Duff's Residual phase puts in an appearance. Both stand as terminal phases of New Zealand Eastern Polynesian culture, however. The advantage of this use of phase is that it permits one to handle non-paralleled historical developments within an area without recourse to ill-defined concepts like sub-cultures, stems, or roots, or to rely solely on integrative concepts like horizon and tradition as advocated by Willey and Phillips (1958: 29). It also prevents one from forcing all cultural development within an area into a single sequence of phases or into precisely parallel sets of aspects where the data do not really warrant it.

Another consideration which arises out of this usage of aspect and phase is related to the effort by present day archaeologists to give their subdivisions of culture a greater degree of social reality by employing units for which a social equivalent may be inferred even if a number of difficulties actually stand in the way of such an assumption. Ideally in a synthesis such as this the contemporaneity of a set of site occupations within a locality makes up a component which represents the full range of activities of a single community.* Rather he excavates a set of beach midden components, a set of dwelling components, a set of burial com-

ponents, etc., belonging to a number of different communities which occupy a given region at any time. Thus his definition of an aspect is based on a relatively small sampling of the site occupations remaining from an individual community and depends instead on building up the regional picture of the aggregate of communities from the patterning exhibited by sets of functionally similar components which appear at the same point in time in the regional sequence. In areas like New Zealand where pottery is lacking this means that the spatial boundaries of an aspect are only identified after extended survey and relatively intensive programmes of excavation in a number of types of sites. For this reason in non-pottery areas the formal content and temporal boundaries of an aspect are frequently known before the regional boundaries can be stated with the same degree of assurance.

An aspect, then, is an *aggregate* of communities by which is meant certain number of communities which are bound by close social, political, military, commercial or religious ties (Chang 1958: 307). In New Zealand it would correspond fairly well with the *iwi* or tribe, while the community, where it was monolineal, would correspond fairly well to a *hapu*, the so called sub-tribe (Buck 1950: 333) or non-unilineal descent group (Goodenough 1955: 72, 78).

The phase and culture, on the other hand as historical units of correlation are not expected to imply so much a social reality as they are expected to indicate participation in a common set of events by a culturally and perhaps physically and linguistically related set of people.

Thus to continue with our New Zealand example, those tribes whose aspects belong in the Experimental phase developed the systematic agriculture on which later Maori culture was based, while those tribes which did not take part in this development were forced to switch from their reliance on a once abundant avifauna to heavier exploitation of the marine fauna, the inland hunting of *moa* and other birds, and trade in scarce goods like argillite and greenstone, traits which characterize

*Operationally, however, the archaeologist seldom excavates the full set of site assemblages for a single community.

Biological	Archaeological	Ethnographic
order	culture	culture
genus	phase	sub-culture
species	aspect	tribe or more integrated social and political units
population	component	community

The relation of the distinction between species and populations which have a genetic reality and genus and order which have a more arbitrary historical reality to the distinction I am making could be further developed as this diagram indicates.

various aspects of the "Residual" Phase in the South Island. In both cases the populations may be assumed to have spoken different dialects of a language now called Maori and to have belonged to a local race now called Maori which is in turn a part of the Polynesian geographical race. Furthermore the cultural origin of both phases and all their aspects has been demonstrated to lie within Eastern Polynesia. The adaptation of this Eastern Polynesian culture to New Zealand conditions therefore constitutes the group of events in which these people participated which distinguish this culture as New Zealand Eastern Polynesian.

In sum, one may argue that the substitution of aspect for phase and the use of phase as well as culture as integrative historical units *within* an area or sub-area gives one a slightly more diversified conceptual approach to the study of culture history. Elsewhere the component and aspect have already been found to be successful operational units with a high degree of possible social equivalence (Willey and Phillips 1958: 56-57; Olson 1962: 471). The present use of phase here provides for another historical-developmental integrative device below the level of culture which avoids the tendency of many archaeologists to think of a phase as both a chronological period within a region and as a stage in the development of a culture. As such it seems a useful conceptual tool for ordering the archaeological evidence in the initial stages of reconstruction of the history of an area.

Later, when the various aspects within an area are more fully and precisely defined they may carry the burden of a fuller and more detailed interpretation of an area's history in terms of mechanisms like those of culture contact, innovation, cultural selection, and adaptation to variations in the environment.

CONCLUSION

As the reconstruction of New Zealand prehistory has only now begun, I have, in this synthesis of the prehistoric sequence for the Auckland Province, concentrated on the definition of six phases. These phases are summarized below; their definitions resting on the first appearance of one cluster of traits, to the next appearance of a new cluster of traits without regard to the survival of those from a preceding phase. In each of these phases definitions of the agricultural stages based on Yen (1961), the earlier settlement pattern types are based on Willey (1960) and the later ones on a *modification* of the community patterning in Beardsley *et al.* (1956) and the climatic interpretation that of Cumberland (1962b).

An Outline by Phase of the Cultural Sequence for the Auckland Province

(The time scale supplied below is only *approximate* because phases are stages of development and may occur in different regions at different periods of time.)

EARLY EUROPEAN MAORI PHASE

(first half of 19th century)

Climate:

At the end of this phase a return toward a slightly warmer and drier climate.

Culture:

A fusion but with the Maori culture still dominant over the intrusive European elements.

Economy:

The introduction of European crops, importance of whaling, and impact of the potato on Maori agriculture.

Settlement Type:

Differentiated, Simple, Nuclear Centred *Pa* of a wide variety of types, the introduction of new *pa* types based on gun warfare, or as the result of changes wrought by the new economy.

Ecological Orientation:

An already much modified New Zealand environment now further changed by new tools, crops, and techniques more efficient in exploiting both old and new ecological situations.

CLASSIC MAORI PHASE

(circa 1650 - 1800 A.D.)

Climate:

Somewhat cooler and damper than today.

Culture:

Maori (in the general sense defined by Duff 1956: 13 and in the archaeological sense as defined by Golson 1959a).

Economy:

An intensive form of *systematic agriculture* able to support a large population; the development of specialized agricultural techniques and forms of storage, numerous *rua*.

Settlement Type:

Differentiated, Simple, Nuclear Centred *Pa* reflecting social segmentation and stratification, an increase in specialized activities and structures for them, and the creation of elaborate defensive systems and of new types of *pa*.

Ecological Orientation:

Ecological variations in availability of basic resources give rise to considerable differences between regions; primary forest vegetation removed to extent that agricultural techniques rendered it profitable; agriculture and mudflat shellfish and fishing predominating.

PROTO MAORI PHASE

(circa 1450 - 1650 A.D.)

Climate:

Somewhat cooler and damper than today.

Culture:

A 'transitional' or 'proto' form of Maori.

Economy:

Systematic agriculture generally based on the *kumara* associated with numbers of semi-subterranean storage structures of several types.

Settlement Type:

Semi-permanent Sedentary *Pa* that are established in successive locations, each for a period of years; a pattern to structures within the community but little evidence for social differentiation; use of terrace or simple ditch and bank, or palisaded defensive systems, or combinations of these.

Ecological Orientation:

Midden deposition in quantity in restricted areas of settlement or on beaches, with mudflat species predominating; manufacturing activities taking place in areas other than middens and central areas of settlements; environment sufficiently modified by man that former avifauna and many sea mammals are no longer available or do not form a mainstay in the diet except in marginal regions.

EXPERIMENTAL PHASE

(circa 1350 - 1450 A.D.)

Climate:

First deterioration of climate toward a cooler and damper phase.

Culture:

A late or 'Archaic' stage in the development of New Zealand Eastern Polynesian culture.

Economy:

Experimental stage in the development of agriculture in New Zealand, probably with *kumara* present; few species of *moa* surviving or being hunted except inland; more use of mudflat species of shell-fish than formerly, and a postulated increased dependence on agricultural products.

Settlement Type:

Semi-permanent settlement in which the structures for dwelling and storage are in *separate* areas; burials usually occur in area of site.

Ecological Orientation:

Environment now sufficiently modified by man that few *moa* are left and sea mammals are of decreasing importance, except in particular areas. This necessitates an increased ability to 'live into' or exploit this new or 'non-tropical' environment and an increased dependence on agriculture.

DEVELOPMENTAL PHASE

(circa 1100 - 1350 A.D.)

Climate:

Slight warmer and drier than today.

Culture:

New Zealand Eastern Polynesian, or in terms of material culture, the Archaic of Golson (1959a) or the *moa*-hunter of Duff (1956).

Economy:

Intensive exploitation of selected species of *moa* and remaining avifauna, according to the modified ecological conditions brought about by man. The *Introductory* stage of agriculture (initially perhaps without *kumara*), and a heavy exploitation of the marine environment, especially sea mammals, fish and rocky-shore shellfish.

Settlement Type:

Semi-permanent settlement in which storage facilities are directly attached to dwellings; burials associated with middens in which evidence for manufacturing, shell-fishing and fishing all occur; the first site components restricted to a specialized activity appear.

Ecological Orientation:

Successful adaptation to the New Zealand environment evident in creation of artifacts of an Archaic Eastern Polynesian form superbly rendered in new media; use of a full range of materials, many of them widely traded throughout the country. Initial modification of that environment evident in fact that fauna from a number of originally juxtaposed ecological niches no longer occur in one site, but in several, with those people on the coast exploiting the open sea more heavily than the sheltered lagoon and tidal river mouth situations.

SETTLEMENT PHASE

(circa 900 - 1100 A.D.)

Climate:

Slightly warmer and drier than today.

Culture:

Initial adaptation of a tropical Eastern Polynesian culture to a New Zealand environment.

Economy:

No evidence for agriculture, due perhaps to likelihood that initial introductions of tropical plants may have failed. Instead, primary dependence on the hunting of a full range of a now extinct avifauna including most species of *moa*; an equally heavy use of sea mammals, fish, and the rocky-shore shellfish found in abundance and of large size.

Settlement Type:

Camp type of settlement dominates, usually with limited evidence of structures and no burials in the site, but a full range of other activities in evidence.

Ecological Orientation:

A full exploitation of the fauna of a then unmodified environment of closely juxtaposed ecological niches; generally oriented toward the coast and utilizing a restricted range of materials for tool manufacture, most materials being of local origin. Inland sites of this phase are generally later and show a slightly different ecological orientation.

THE PREHISTORIC SEQUENCE IN THE AUCKLAND PROVINCE IN RETROSPECT

This chapter is a revised version of a paper given at the 1968 ANZAAS Congress in Christchurch in the Symposium entitled "Re-assessment of the Prehistoric Sequence in New Zealand". To members of that symposium, W. R. Ambrose, L. M. Groube, D. R. Simons, and C. F. W. Higham, I am indebted for discussion. The present version has had in addition the critical commentary of Miss Janet M. Davidson. From these people I have learned much, but the views presented here are, of course, my own.

INTRODUCTION

The practice of archaeology in New Zealand continues to be more advanced than that elsewhere in Oceania. Various theoretical and methodological innovations are much discussed in the available literature and in papers at conferences, despite a relatively poor record in the publication of detailed excavation reports. As a consequence the prehistorian in New Zealand is already concerned with problems and approaches that are viewed as constituting the next stage in the development of archaeology in Oceania (Spoehr 1968). For this reason any attempt to synthesize the prehistoric cultural sequence for a part of New Zealand soon becomes dated by new data resulting from the application of more sophisticated methods of recovery and analysis and by critical reappraisal of earlier studies. Thus as I predicted in my Preface to the first edition of *A Review of the Prehistoric Sequence of the Auckland Province* (page 11), the theoretical framework I used to organize my materials soon attracted new data which contradicted some of the views presented and suggested new avenues for investigation. Still the *Review* served as a basis for extended

comment and criticism (Golson 1965; Groube 1967) and the ensuing discussions, I think, have further advanced our understanding of New Zealand prehistory, particularly that part dealing with the long neglected northern part of the North Island. Moreover, as nothing has yet replaced this review, I have finally agreed to its being reprinted provided I could append this postscript in which I endeavour to give the reader some notion of the direction in which the recent literature has taken the subject, and some of my own views on the matters discussed in this *Review* as I now see them.

In the last eight years a great amount of new research has been undertaken in New Zealand. A list of those excavations bearing directly on the prehistory of the Auckland Province has recently been compiled by Law (1969) whose summary indicated the very limited extent to which much of the data recovered has actually been published, except on a preliminary level. A main exception is a series of papers focussed on the Auckland City area and the offshore island of Motutapu (Davidson 1970 a, b, c; Leahy 1970; Allo 1970; Scott 1970; Law 1970).

On a more general level, but with equal relevance to the theoretical issues taken up in the *Review*, are a number of studies of middens and their analysis as well as their relationship to Maori economy (Davidson 1964, 1967; Ambrose 1967; W. Shawcross 1967; Terrell 1967; H. Leach 1969). We also have a much fuller understanding of the regional variation in Maori settlement patterns in the North Island and a better idea of the place of various types of fortified *pa* within that framework (Buist 1964; Groube 1964 a, b; 1965; Kennedy 1969). Finally my pessimism about the utility of portable artifacts for integrating data from different sites or in demonstrating sequential

change has proved in some cases to have been ill-founded, as studies of fishhooks (Trotter 1965; Crosby 1966; Hjarno 1967), flake tools and their sources (Green 1964; Shawcross 1964 a; Simmons and Wright 1967; F. Leach 1969), wooden combs (W. Shawcross 1964 b) and entire assemblages (Simmons 1967) have shown. At the same time my optimism about the use of pits and other structural artifacts for this purpose has not proved to be fully justified (Groube 1965, 1967; W. Shawcross 1966; Bellwood 1969; Davidson 1970b).

Other developments have also been important. For instance, the interpretation of New Zealand prehistory using fragments of the oral literature and genealogies, which I tried to avoid, has now been subjected to intense scrutiny and criticism (Simmons 1963, 1969; Robertson 1966) and the future incorporation of such materials in accounts of New Zealand prehistory is likely to be on a far sounder basis. At the same time our knowledge of the proto-historic period has increased immeasurably as has the critical use of historical data in the interpretation of the archaeological record (Groube 1964a, 1965; Simmons 1967; K. Shawcross 1966; 1967; Kennedy 1969). For this reason my treatment of the Classic and Early European Maori phases would today be more circumspect and their definitions probably far sounder than they are (see below).

Retrospective View

How then do I view this work today? To begin it should be noted that I draw a distinction between the writing of prehistory or culture history and the interpretation of strictly archaeological data. To my mind culture history can be and is written by many people such as linguists, ethnologists, and ethnohistorians, as well as archaeologists and it can be written using a wide variety of data, only some of it archaeological. However, in writing site reports or articles concerned with individual aspects of data recovered by means of archaeology, the treatment of the data is, I believe, a quite different kind of intellectual operation. This difference is quite clearly reflected in my own work. On the one hand I have written site

reports and articles describing and interpreting quite closely archaeological data which I have recovered. These I expect to have some utility for my colleagues and to be of some value to those students and scholars who follow. On the other hand, in writing a prehistoric synthesis I tend to range over a wide variety of evidence, attempting to impart some order by use of a combination of explicitly delineated constructs. As the "models" used are sometimes later found to be inappropriate to the task, it should cause no surprise that such prehistories constitute very general here-and-now interpretations which colleagues may reject or replace. In short they are reconstructions whose long term utility is limited because, as in the writing of histories, there appears no end, unless one believes that there is a single discoverable prehistory capable of recognition by means of some innately superior discovery process. I doubt that this is the case and so prefer the type of prehistory, that while it requires a certain amount of creative activity, uses explicitly expressed constructs rather than an imaginative narrative process to arrive at a result. In such an approach, as the constructs are falsified by the data, or as new data suggest better constructs, new prehistories can be written, each incorporating some constructs that were already present along with many that are new. For this reason such accounts of the prehistory of an area like the Auckland Province of New Zealand must grow more complex as knowledge of the materials on which they depend expands.

This brief philosophical statement is included because I believe it is germane to understanding my position in writing this synthesis in the first place, and why I feel no particular concern if others now find that a satisfactory synthesis requires extensive revision or even replacement of the present work.

Replies to various criticisms of the present work could take one of three approaches:

1. This is not what I said.
2. That is not what I meant—I now wish to make my meaning clear.
3. The critics are right.

However, I am not disposed to reply at length to my critics on any of these grounds,

for I believe such discussions are best left to historians of New Zealand prehistory and need not be of concern here. Rather as a result of these criticisms and the evidence on which they are based, I would like to outline what I now consider some of the major defects of the *Review*. Also I would like to say something about those concepts employed which I still consider useful because this is the first time I have formally attempted an assessment of the overall validity or utility of this approach since publication of the *Review*.

Major Defects

There are some major defects in the *Review* which I recognize as the result of more recent studies. These include the following:

1. The identification of certain pit structures as houses or dwellings. Here, even though I was for the most part following the interpretations of the excavators of these structures, I was probably wrong in the interpretation of some pits as dwellings rather than *kumara* stores. Today I would need to take into account the discussion of Groube (1965), Shawcross (1966), Bellwood (1969) and Davidson (1970 b and c) on the recognition of dwellings. However, I must admit to being unconvinced by those who argue that all pits are to be interpreted as storage structures, for many of the very shallow ones, I feel, are not easily interpreted as *kumara* stores, and other possible functions including that of habitation are not much discussed.

2. The fitting of the agricultural model of Yen (1961) into my sequence of phases. As Golson (1965) noted, this was not as satisfactory as it might first seem and from more recent discussions with Yen I now believe it likely that *kumara* was introduced at the same time as other domesticated agricultural plants, and that it is very likely that this was toward the beginning of, rather than later in, the prehistoric sequence.

3. The employment of an American based settlement pattern model, which even with a number of modifications, was clearly not a satisfactory one to apply in the New Zealand situation.

Both Groube (1967) and I (Green 1967) have discussed elsewhere the general problem of a satisfactory settlement pattern model for New Zealand, while the permanent settlement part of it has been commented on by both W. Shawcross (1968) and Bellwood (1968) in the light of their experiences with various swamp *pa* sites.

4. The use of a climatic sequence which seems to have been the subject of much serious misinterpretation (Simmons 1965; Pullar 1966; Gorbey 1967) and would better have been left out, as the argument I made stands or falls on nothing more than whether it was slightly warmer in the North Island of New Zealand before 1300 A.D. or not. If it was, the area of New Zealand in which there were no killing frosts was larger and the Polynesian pattern of vegetative reproduction of food plants was easier and could have spread over a wider area at an early date. If it was not warmer and the frost free area was very confined, it was necessary to develop an alternative means of propagating the *kumara* before the systematic stage of agriculture could develop and spread as widely as it did in New Zealand.

There are also other defects, some of which were noted above, but in my view they are of a minor sort and easily corrected from the more recent evidence.

The Conceptual Framework

More fundamental is the question of whether I would still use the same type of evolutionary model, for on this issue I have been more extensively criticized than for any other defect. I think I would use such models and shall try to explain why.

It is my view, for instance, that Groube (1967) can only maintain his own theoretical position by adopting what I consider a false and over restrictive definition of evolution, in an effort to distinguish it from what he calls development. This forces him to overlook what I defined as cultural evolution in the New Zealand sequence and to characterize the basis for all cultural change in evolutionary versus developmental systems in ways with which I cannot agree. This, however, is not the place

to argue a very complex theoretical issue. Let me simply say that for me the term evolution continues to mean descent with modification which proceeds only by micro-evolutionary steps. While changes that occur in genetic evolution, whether by sampling error, mutation, selection, or hybridization, are all small scale, some few have unexpected consequences which give rise to major radiations. These major steps, or macro-evolutionary advances, some of them irreversible, are really retrospective simplifications of the micro-evolutionary process however, and not the major focus of evolution itself. For rather similar reasons, I do not believe it valid to restrict evolutionary conceptual structures to general cultural evolution, when in reality the processes also operate at the level of specific cultural evolution (Sahlins, Chap. II in Sahlins and Service 1960). Both provide domains in which to use evolutionary notions and both are brought about by the same processes of cultural changes. I thus believe Groube's restriction of these processes to changes which he considers self-transcending and therefore evolutionary, unwarranted.

In a useful discussion of cultural evolution, Carneiro (1967) points out that since Spencer it has been defined as growth and development, in a context in which growth refers to an increase in substance, and development to an increase in structure. The interplay of the two processes gives rise to successively differentiated forms. It continues to be my contention that the archaeological record for the Auckland Province reveals both growth and development, with the result that more differentiated cultural forms or patterns were present at the end of the sequence than were present at the beginning. I would agree that such change as occurs is at present not well defined and probably does not involve one of the more usual "self-transcending" cultural changes or steps that is commonly thought to follow the Neolithic in the major centres of world civilization. But I do not see this as a reason to deny that the processes involved in the changes that did occur are those of cultural evolution or to forego the use of such notions when describing the development of one cultural form out of another

within that stage called the Oceanic Neolithic.

It is this last position that I took and would still take with respect to cultural change as characterized by the available evidence for the prehistoric sequence for the Auckland Province. I still believe it fair to begin with the work of my predecessors by identifying two major cultural assemblages which I called—to avoid purely terminological disputes—New Zealand Eastern Polynesian and Maori Culture. The first was widespread throughout New Zealand at an early date, and not much differentiated from region to region except where it survived in a modified form in parts of the South Island almost to the time of early European contact. The second, it can be argued, *evolved* (whether internally or as a result of outside contact is immaterial) in the northern part of the North Island, and then by successive adaptations to local environments spread slowly south in areas capable of supporting agriculture (Simmons 1969 b). Each culture may be characterized by successive periods of regional development, which I called aspects, and those aspects which are related by participation in selected sets of rather similar events may also be grouped together into what I called phases. The very fact that the two cultures are capable of division, I believe, supports their identification as cultures rather than phases or aspects.

I would make the following points in support of this position:

1. There is now good evidence of the widespread establishment of New Zealand Eastern Polynesian Culture from one end of New Zealand to the other and this position grows more secure with each excavation of an early site in the North Island (W. Shawcross 1969: 193). In the South Island, divisions within that culture, initially recognized by Lockerbie, largely in economic terms, are now supported by studies of the portable artifacts delineating changes within successive assemblages (Simmons 1967). In the North Island a similar situation appears to obtain in the Auckland Province, although existing definitions are still largely in economic terms and neither very precise nor as yet related to changes in the

assemblages of portable artifacts, except perhaps those dealing with obsidian flakes and their sources.

2. The evidence from the southern part of the South Island is now fairly clear on the point that it was by site and trait unit intrusion well into the 1880s that Maori Culture was introduced from the north. The same process seems to be true of the rest of the South Island as well, though of earlier date, making it reasonable to claim that Maori Culture did not evolve there and that after intrusion it exhibits little cultural change (Simmons 1969b). It may even be that its intrusion into regions farthest south was achieved only after the addition of white potato to the economy (Simmons 1967).

3. No one has seriously challenged the contention that Maori Culture stands as a qualitatively distinct cultural entity by the time of the late Classic and Early European Maori phases of my sequence. Not only is it distinct from the earlier New Zealand Eastern Polynesian Culture in terms of both growth and structure, but it is also markedly different from the contemporary cultures in both West and East Polynesia at the time of contact. This is so, for example, in art forms, a number of common portable artifacts, settlement types, religious structures, and economy. What I am saying here is that in any overall view of Polynesia, Maori Culture represents a stage of growth and development away from the ancestral Eastern Polynesian Culture which deserves recognition as a separate development above the level of phase.

4. In contrast to the South Island, there is evidence for both internal change and regional development of Maori Culture in the North Island before as well as after contact with the European world. This evidence is reflected in the regional diversity recorded at the time of contact as well as in the technological and economic changes known to have occurred historically within that culture before it came to an end (see below).

In summary then I believe that with a suitable settlement pattern model, a better scheme for integrating the archaeological materials with the agricultural sequence, a reworking of

the portable artifacts assemblages from a number of sites, and the publication of the details from many new sites that have been excavated in the Auckland Province, it would be possible to produce another *Review* which sketched the developments in northern North Island prehistory by means of regional aspects and inter-regional phases set out as a series of sequences. I make no claim that this is the only model possible, only that it is still a valid approach in which one need not make any greater assumptions than are commonly made in writing other prehistories. The details of such a revised sequence, however, would be far more complicated and difficult to handle now than when I attempted it. Therefore I shall conclude with an assessment of what I think is possible and in the course of this examine some of the problems which exist.

Early European Maori Phase

The last phase of Maori Culture in the Auckland Province which I designated the Early European Maori is becoming increasingly possible of definition historically as the result of the recent work noted above by Groube, K. Shawcross, and Kennedy, and archaeologically as the result of excavations in sites such as Paeroa, Ngaroto and others which last into the historic period. In this connection it should be emphasized that the term protohistoric does not provide a very satisfactory definition of the final phase, referring as it does to the entire span of early contact and not the phase defined by major changes in the content of the Classic Maori Phase. The changes in economy, for instance, which I would use as part of the definition of the Early European Maori Phase, seem to start in the north, with white potatoes not becoming plentiful until 1800 or after, and pigs not until after 1805. K. Shawcross (1966: 268) for example, places the major change in Maori economy after 1814 in Northland, and the changes produced by muskets on warfare and fortifications after 1820. Moreover, I do not believe this phase can be regarded as other than a valid part of and end point for Maori Culture, even though it developed under the stimulus of European contact. Until the 1840s

traditional Maori Culture was the dominant resident culture and it is only after that point that many of its constituents were totally replaced and the whole transformed into a new cultural entity. Before 1840 the process was one of addition to and elaboration of already existing patterns. The tendency of both Golson and Groube to delete this phase from consideration in their assessments of the degree of cultural change in the prehistoric sequence for New Zealand is one with which I do not agree. Why, one could ask, is contact with a largely non-resident European culture resulting in change to be excluded, while changes induced by possible contact with other cultures in the Pacific are to be included. Rather it would seem to me that recognition of an Early European Maori Phase as part of Maori Culture is a valid concept, and one which has important consequences when attempting to assess the nature of cultural change which forms the basis for any outline of the culture history of Polynesians in New Zealand.

Classic Maori Phase

I am convinced that an archaeological definition of this phase would not be difficult to construct from both portable and structural artifacts and from historical records attesting to their existence and function. The evidence consists of the artifacts described in the writings and drawings of the early explorers and the items in their collections together with those now being recovered in increasing numbers from swamp and hill *pa* sites. The problems of elaboration of some items in the next phase as a result of regular European contact are not as difficult to control as some have tended to imply. Here it is important to realize that after the initial contact of the first explorers no vessels are known to have been in the vicinity of Northern New Zealand between 1772 and 1792 and that between 1792 and 1801 perhaps 13 ships touched at one of three points—North Cape, Doubtless Bay and principally the Thames Estuary (K. Shawcross 1966: 125). Thus it was after 1801 that contact was frequent and trade sufficiently regular to affect the content of the Classic Maori assemblage. Before this items

traded to the Maori were of a limited range, the majority being iron tools such as axes, adzes, chisels, nails and iron fishhooks. It would not appear that the earlier contacts and irregular trade had significantly altered the technology, economy, or settlement pattern of the Classic Maori Phase, so that even accounts as late as the first decade of the 1800s are useful in defining that phase. What is needed in any definition is greater recognition of the regional variations that obtained within the phase in the Auckland Province. In short, the existing definition of this phase in terms of portable artifacts, by Golson (1959) is not as badly conceived as some might think, and my own attempt to add the economy and settlement types, while not as well handled, is now capable of much better definition.

Proto-Maori

We seem little further along in the definition of a Proto-Maori phase than we ever were. This reflects the fact that we have few sequences from Classic Maori sites that extend very far back in time, and that we have very little understanding of the changes that took place in the presumed evolution of Maori Culture in its earliest stages out of New Zealand Eastern Polynesian Culture. Until sites are excavated which bear on this problem, neither this presumed phase, nor the processes involved in its development are going to be satisfactorily defined. In my view this is one of the most pressing problems of New Zealand prehistory, for until we tackle the issue archaeologically, no really satisfactory cultural sequence for the Auckland Province is going to be forthcoming. I still believe the earlier part of the Kauri Point *pa* sequence, and the stylistically earlier portion of the comb assemblage (W. Shawcross 1964 b), along with its associated artifacts, belong in such a phase and are an indication of what we may expect, but closer appraisal can only be made after publication of the remaining excavation results.

New Zealand Eastern Polynesian Culture

The major changes required in this section concern better definitions of the settlement types

and the deletion of any precise correlation of the archaeological phases with Yen's agricultural stages. On the latter point, I would probably cite the slowly accumulating evidence for thinking that some type of agriculture is to be associated with this culture from the beginning and note that while food stores are in evidence, there is as yet no evidence that they are defended.

In this culture, two and perhaps three phases would still seem to be required in the Auckland Province. The definition of an Experimental Phase, however, is very unsatisfactory, as it depends so heavily in a correlation of pit types between the Skipper's Ridge I and Sarah's Gully sites (Bellwood 1969). The two earlier phases, however, I believe could be distinguished on a number of counts now, especially as we have the additional evidence from stratified sites in Northland.

Characterization of a Settlement Phase throughout New Zealand as one which is coastally oriented with evidence for the hunting of a wide range of the indigenous avifauna, but with main reliance on the resources of the sea is, I think, valid. Later in the Auckland Province some of these resources became very restricted or non-existent and others took their place. It is here that one has to consider carefully the degree to which this is to be related to an increasing reliance on domestic plants brought from the tropics or on locally produced fern root. At present there is no firm evidence of the degree to which agriculture played a part in what appear to be largely seasonally occupied settlements possessing materials reflecting a fairly full range of other cultural activities. In such contexts it would obviously be wise to replace the terms camp

and semi-permanent settlement with something more satisfactory.

Multiple Origins

The possibility of more than one origin for New Zealand Eastern Polynesian Culture was not explored in the *Review*. The assumption made was the then prevailing view that a single source (often labelled Tahiti) was involved. I do not believe the evidence allows us to make this assumption any longer (Green 1966, 1967 b; Sinoto 1968, 1969) and would explore the problem and its possible consequences at some length in setting out the conceptual framework for the *Review*.

Conclusion

It is always difficult to view one's work dispassionately, even in retrospect. I do feel that in the context in which it was presented *A Review of the Prehistoric Sequence in the Auckland Province* served some of its intended purposes. I am not so sure in permitting it to be reprinted, however, that this would be the case now, and I have therefore appended some of my own views on the subject matter which it treats, principally as a guide to those inclined to use it in teaching (one of the main reasons for the request for reprinting) and as an account of some of the pitfalls into which I believe I fell in attempting this task of synthesis. Should any be inclined to follow along this particular trail, I hope that this commentary will not discourage their efforts, for of the writing of culture histories there should be no end, but only a long and increasingly more satisfying series as we come to know our subject better.

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